

# “Timeout” Issue Frequently Asked Questions

## **Describe the software issue PTC has identified.**

PTC has identified an issue in Pro/ENGINEER's IPC (interprocess communication) library that affects run-time communication between applications, and the ability to install the software. Specifically, the issue lies within a common function that is used to monitor IPC calls and allow them to “timeout” gracefully if they cannot be completed. For example, this capability ensures that a call from Pro/ENGINEER to Pro/INTRALINK can terminate gracefully if the Pro/INTRALINK server had been purposely stopped. The root cause of the issue is an incorrect value having been placed in a constant that is used to identify a theoretical “infinite time” in the future. Because the value of this constant was not set to the largest possible value, the theoretically infinite time will be reached on Saturday, January 10, 2004 13:37:04 GMT, which is Saturday, January 10 08:37:04 EST.

After that time, certain processes initiated by Pro/ENGINEER will appear to timeout prematurely because the code will believe that “current time” has surpassed “infinite time”. The software obtains the “current time” by making an Operating System call, which manages the clock on the computer system. To end-users of PTC products, this means that once their computer's clock reaches this date, they will not be able to use a variety of commands and capabilities provided through PTC software.

## **What products are affected? Does this issue affect both Pro/ENGINEER and Windchill?**

Because this function was added to a common Pro/ENGINEER IPC library in 1997, it has been incorporated into many PTC products produced since that date. The primary software modules that directly use the affected timeout function are Pro/ENGINEER's “name service manager daemon” (“nsmd.exe”) and the PTC/SETUP installation and setup tool (“ptc-setup.exe”). In releases prior to Pro/ENGINEER Wildfire, the core Pro/ENGINEER executable does not directly call the timeout function and therefore does not require modification, though it is still important to update the name service daemon and PTC/SETUP. With the introduction of peer-to-peer and other new forms of inter-process communication in Pro/ENGINEER Wildfire, the core executable directly incorporates the timeout function, so the core executable must be updated as well.

Additionally, certain versions of Windchill prior to Release 7 utilized the affected PTC/SETUP tool, and both the Windchill Workgroup Manager for Pro/ENGINEER and the “Pro/INTRALINK to Windchill Gateway” utilized the affected name service daemon.

**What specific releases of those products are affected?**

Specifically, the following PTC products and corresponding releases will be affected in various degrees by this software issue.

- Pro/ENGINEER Wildfire 2.0 Pre-Production
- Pro/ENGINEER Wildfire
- Pro/ENGINEER Release 2001
- Pro/ENGINEER Release 2000i2
- Pro/ENGINEER Release 2000i
- Pro/ENGINEER Release 20.0
- Pro/INTRALINK Release 3.3
- Pro/INTRALINK Release 3.2
- Pro/INTRALINK Release 3.1
- Pro/INTRALINK Release 3.0
- Pro/INTRALINK Release 2.0
- Windchill Release 6.2.6 (Includes Windchill PDMLink, Windchill Foundation, Windchill ProjectLink, and Windchill DynamicDesignLink)
- Windchill Release 6.2 (Includes Windchill Foundation and Windchill ProjectLink)
- Windchill Foundation Release 6.0
- Windchill Release 5.0
- Granite (Beta 3.0)
- Pro/CONVERT
- Pro/PDM
- Pro/ENGINEER Wildfire Student Edition

**What platforms are affected?**

The software issue will affect all supported platforms of the product releases listed above. The fix, however, involves binary executables that are platform-specific so it will be important to download the correct patch for a given operating system.

**Specifically, what will happen on January 10th, 2004?**

There are two major implications of this issue.

The first relates to communication between Pro/ENGINEER and other software applications. Unless PTC's software patch is installed, beginning on January 10, 2004 certain inter-application communications will timeout prematurely and no longer function properly. For example, Pro/ENGINEER and Pro/INTRALINK will not be able to effectively communicate with one another nor would Pro/ENGINEER Release 2001 and the Workgroup Manager for Pro/ENGINEER 2001 work properly. Similarly, the Windchill Pro/INTRALINK Gateway will not be able to communicate effectively with Pro/ENGINEER. Furthermore, most Pro/TOOLKIT applications that run in conjunction with (and communicate with) Pro/ENGINEER will no longer function properly. Some other capabilities in Pro/ENGINEER such as the Associative Topology Bus and Distributed Batch processing will no longer function properly. Also, many of the inter-application communication capabilities of Pro/ENGINEER Wildfire will not function properly, including Peer-to-Peer Design Conferencing, File, Send To, Opening files from within "zip" files, and from HTTP or FTP sites.

The second major implication of this software issue relates to PTC's Installation utility, PTC/SETUP. Unless PTC's software patch is installed, PTC/SETUP will no longer function properly. This means that any application that uses PTC/SETUP for installation will no longer be able to be installed or re-installed.

Please note that only the PTC/SETUP is affected for Windchill 4.0, Division Mockup and CDRS. These products will otherwise function normally.

**What do I need to do to avoid any interruption of operation?**

PTC will be providing a downloadable update (patch) for your many PTC applications, which must be downloaded and installed before January 10, 2004. For Pro/ENGINEER releases prior to Wildfire, the update will have two components:

- a.) An updated, small file ("nsmd.exe") must be replaced in a single location within your Pro/ENGINEER loadpoint. This file replacement will immediately remedy most of the critical inter-application communication issues, and restore normal behavior to Pro/ENGINEER working with Pro/INTRALINK, the Pro/INTRALINK Gateway, Windchill Workgroup Manager for Pro/ENGINEER, Pro/TOOLKIT applications, Distributed Batch and the Associative Topology Bus.
- b.) A new version of PTC/SETUP. This new version of PTC/SETUP will be used instead of the existing versions on your current CDs, and can be used to install the existing software programs that you currently have.

For more recent Pro/ENGINEER releases starting with Wildfire, PTC will make a new maintenance build available to customers which addresses all occurrences of the issue.

More specific instruction for various release of PTC products will be made available at [www.ptc.com/go/timeout](http://www.ptc.com/go/timeout) as the software downloads become available. The downloaded components will be release-specific and platform-specific.

**What is the time frame for making these updates available?**

We expect to have patches available for download beginning Friday, December 19, 2003. Patches for the most widely deployed product releases will be made available first. PTC will continue delivering patches daily thereafter.

**Will my data be at risk of corruption?**

This issue affects run-time communication between applications, and the ability to install the software. We have seen no evidence of data corruption, and believe that there is no risk of this at customer sites.

**Can I avoid interruption of operation by setting the clock on my computer back, to a date earlier than January 10, 2004?**

PTC plans to deliver all relevant patches prior to January 10, 2004, providing our customers enough time to download and deploy these updates. Testing has indicated that simply resetting the operating system date to a date earlier than January 10, 2004 will avoid the problem. However, doing so could have other unintended effects on typical data management operations, so PTC does not recommend this approach.

PTC does not recommend using this work-around, but instead suggest the download and installation of the appropriate patches.

**Will I still be able to run Pro/ENGINEER until January 10, 2004 without any difficulties?**

Testing has indicated that all applications should continue to function normally until this date.

**Will I still be able to run Pro/ENGINEER after January 10, 2004 without this fix?**

In general, Pro/ENGINEER will continue to function after January 10, 2004; however various commands and capabilities that utilize inter-process communications will no longer function properly. PTC strongly suggests that all users download and install the appropriate patches.

**I am not currently active on maintenance. Will I still be able to avoid interruption of operation?**

PTC will make the downloadable patches available to all customers, regardless of their maintenance status. Patches and instructions will be made available at [www.ptc.com/go/timeout](http://www.ptc.com/go/timeout)

**I don't use any of the capabilities that will be affected. Do I still need to update some of my files?**

PTC strongly suggests that all users download and install the appropriate patches.

**When did PTC learn of this issue?**

PTC detected this issue on December 12, 2003, and has been working around the clock to identify the extent of the issue, create fixes, and communicate responsibly to our customers as quickly as possible.

**How did PTC identify the extent of this issue?**

PTC identified the extent of the issue through code analysis, and massive automated and manual testing operations.

**What is PTC doing to ensure that this doesn't happen again in the future?**

PTC is in the process of performing a root-cause analysis, and will implement appropriate QA policies to ensure that in the future this type of issue is detected and resolved earlier. We do not believe there are any other occurrences of this or similar problems, nonetheless QA has begun testing all software applications on machines with future dates, and any issues identified in the future will be resolved via existing maintenance-build streams.

**Do I have to upgrade to a more recent build or a more recent release of the software?**

The patches being prepared by PTC will allow customers who have versions of Pro/ENGINEER prior to Wildfire to simply update the name service daemon and PTC/SETUP capability while continuing to use Pro/ENGINEER at existing release and maintenance (datecode) levels.

Pro/ENGINEER Wildfire users will require a new maintenance build (datecode 2003450) to address all occurrences of the issue. Customers who do not wish to install the new Pro/E Wildfire maintenance build may optionally download and install the name service daemon patch, which will address the most critical issues, including Pro/INTRALINK, Pro/TOOLKIT, Windchill Pro/INTRALINK Gateway, and Windchill Workgroup Manager for Pro/E interactions. However, PTC strongly suggests that Pro/E Wildfire users upgrade to the latest maintenance build as soon as possible in order to restore all inter-application communication functionality.

**What is the risk associated with implementing this fix on my system?**

Before making them available for download, PTC has fully tested each of the various patches to ensure that no new issues are introduced by this patch. Given the simple nature of the problem being an incorrect constant value in a single function, PTC has a high degree of confidence that this patch provides a low-risk remedy to this time-based issue, and highly recommends that all users download and apply appropriate patches as soon as they become available.

**Will a patch be made available for all affected products?**

With a few exceptions, PTC plans to make patches available for most of the affected products.

No patches will be made available for Pro/ENGINEER Release 20. PTC recommends that any customers still using Pro/ENGINEER Release 20 upgrade to any of the more recent releases of Pro/ENGINEER.

No patches will be made available for Pro/ENGINEER Wildfire 2.0 Preproduction. All customers who have downloaded or requested CDs of Pro/E Wildfire 2.0 Preproduction will be contacted directly when a new Preproduction build is available.

No patches will be made available for Granite 3.0 BETA. The issue will be resolved in the production release of Granite 3.0.