

## Process Controller v3.0

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### 1) General Information:

Process Controller is designed to run in the background on any computer running a Microsoft Windows OS, and monitor all the processes running on that machine.

It tracks the processor usage of all running processes, and when those processes exceed thresholds defined in Process Controller the specific processes concerned are throttled back by having their 'Processing Priority' lowered.

This allows the throttled processes to still run at full speed, but permits other processes to usurp the throttled processes for processor time.

This can make a massive difference in the performance and responsiveness of machines with large numbers of running processes, like a Terminal server/Citrix server for instance.

Say for example you have a terminal server with 40 users all running full thin client desktops. A user opens an instance of Internet Explorer, and due to a faulty page or add-in their instance starts to use all the processing power it can.

Without Process Controller the faulting instance of Internet Explorer will have the same processing priority as all the other user threads running on the machine and the 39 other users will suddenly see their desktops slow to a crawl.

With Process Controller the faulting instance will be downgraded to 'Below Normal' processing priority after a few seconds so whilst it will still take up all the processing time it can, other processes will be able to usurp it for processing resources. The 39 other users will no longer

notice any slowdown, in fact even the user with the faulting instance will only notice Internet Explorer slow down. All their other apps will remain fully responsive.

## 2) Pre-Requisites:

Process Controller has been designed to be a lightweight as possible, and have the smallest footprint possible.

Process Controller will run on the following Windows Operating systems:

Windows 2003 Server (32 and 64 bit)

Windows 2008 Server (32 and 64 bit)

Windows Vista (32 and 64 bit)

Windows 7 (32 and 64 bit)

The only pre-requisites are an up to date version of Windows Installer and the .Net Framework 3.5. If either of these is not available then the Process Controller setup will download and install them for you.

## 3) Installation:

Download and run the latest setup routine from <http://www.mltek.co.uk/ProcessController.aspx>.

Run the installation and select all the default options. If you are prompted to download any Pre-Requisites please check your internet connection and then allow this to proceed.

If you are upgrading from an earlier version please use Add/Remove Programs to uninstall the existing version first.

## 4) Setting Up – Fixed Throttling:

This feature allows you to specify hard and fast rules on a per process basis, defining standard actions to take on any processes of the specified names. So for example you could always 'Demote' any processes called 'IExplore.exe' to below normal processing priority, or perhaps increase any processes called 'MSWord.exe' to above normal priority.

You can even set Process Controller to terminate any processes of a given name on sight, like 'AdobeUpdater.exe' for example.

These rules happen regardless of any measurement of processor utilisation.

## 5) Setting Up – Dynamic Throttling:

Dynamic Throttling is what gives Process Controller the ability to monitor a system and dynamically respond to changing utilisation levels on a process by process basis.

When setting up dynamic throttling you need to set up several settings for each process you want to dynamically throttle.

Process name = The name of the process minus the extension e.g. 'notepad' not 'notepad.exe'.

Utilization Threshold = The % usage of processor time a process of this name must exceed before it starts to generate 'Over Threshold Events'.

Trip Count Required to Throttle = The number of 'Over Threshold Events' that must be generated before a process is throttled. The trip count starts at 0 and the process will be throttled when it reaches the specified count.

Cycles To Downgrade Process = The number of cycles to downgrade the process for. The default setting is one cycle equals 3 seconds.