



 O&O CleverCache 6
Server Edition

O&O CleverCache 6 Server Edition
Rev. 2007-05-03

© 1998-2007
O&O Software GmbH • Am Borsigturm 48 • 13507 Berlin • Germany

Text, illustrations and examples have been produced with great care. The editor is neither legally nor in any other way liable for incorrect information given and its possible consequences.

This document is protected by copyright. All rights reserved. Without written approval no part of this document may be reproduced through photocopying, microfilming or any other procedure, nor may it be translated into a language used by machines, especially data-processing plants. Rights are likewise reserved for quotation in lectures, on radio and television.

Microsoft, Windows, Windows NT, Windows 2000, Windows XP, Windows Vista and Windows 2003 are registered trademarks of Microsoft Corporation, Redmond, USA. O&O and the O&O-logo are registered trademarks of the O&O Software GmbH, Berlin

Table of Contents

About O&O CleverCache	1
Welcome to O&O CleverCache	1
About O&O CleverCache	1
Increasing Performance through Cache Optimization	1
Caching Problems in Windows	1
“What does O&O CleverCache do?”	2
About Licensing	4
Installation and System Requirements	5
System Requirements	5
Installation	5
Registration	6
Unregistered Trial Version	8
Uninstallation	9
Getting Started	10
Running O&O CleverCache in the Background	10
Customizing the Most Important Settings	10
Basic Settings in O&O CleverCache	10
Mem-O-Free and Mem-O-Safe	11
O&O CleverCache Statistics	11
O&O CleverCache Control Center	12
Windows Integration	12
O&O CleverCache Control Center Interface	13
Quick Toolbar	14
O&O CleverCache	15
Cache Monitor	16
O&O AutoSense and Profiles	17
Creating a New Profile	18
Deleting a Profile	18
Renaming a Profile	18
Importing and Exporting Profiles	19
File Cache Settings	19
File Cache Size	20
File Cache Assessment Interval	22
Mem-O-Free	22
Mem-O-Safe	23
Extras	24
Processor Time	24
Memory Use	25
File Access	25
System Monitor	26
Processor, Main Memory, System Cache and Hard Drive	26

Status Monitor	27
Closing the O&O CleverCache Control Center	27
Support and Contact	29
Technical Support	29
Authorized Resellers	29
End-User License Agreement	30

About O&O CleverCache

Welcome to O&O CleverCache

Thank you for choosing O&O CleverCache 6! By making this decision to purchase, you now own one of the most technically advanced and user-friendly cache optimization software products for Windows on the market today.

We hope that you are satisfied with our new O&O CleverCache 6. We are confident that O&O CleverCache 6, as it has already done for millions of users around the world, will keep your system performing at its maximum.

Your O&O Software GmbH
www.oo-software.com

About O&O CleverCache

The new Version 6 not only offers Windows Vista compatibility but also a whole range of enhancements to the renowned methods and options. Even if you are an inexperienced user, configuring O&O CleverCache to automatically optimize the file cache is a cinch. After configuration is completed, you can rest assured with the knowledge that your system will be performing more quickly and reliably than ever before. O&O CleverCache handles all the fine tuning of your system, so you don't have to!

- O&O AutoSense Profile (predefined profile for applications)
- Monitoring of the most important system components (CPU, Memory, etc.), system tuning, and advanced functionality by way of the task tray.
- Improved file cache managements in Windows XP, Windows 2000, Windows NT and Windows Vista
- Detailed memory use and cache statistics
- Mem-O-Free for more available main memory
- Mem-O-Safe for increased security in the event of a system crash

Increasing Performance through Cache Optimization

Caching is meant to accelerate a system's operating system. When files are read, they are transferred from the hard disk to the main memory. This is because accessing data stored in the main memory can be done a lot faster than accessing data stored on a hard disk. The operating system is responsible for transferring those files between the hard disk and the main memory, optimally balancing this process for peak performance.

Caching Problems in Windows

The Windows operating system executes its read and write operations with the help on an integrated cache management system. However, this system is not always helpful in increasing overall performance. Often some file operations reserve large segments of mem-

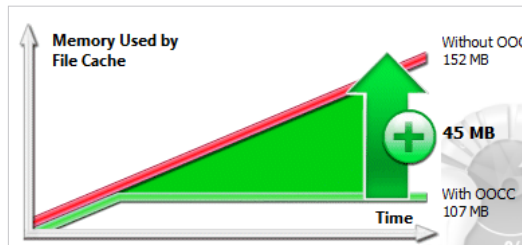
ory for the file cache, leaving less memory available for running applications. As a result, additional requests to save data to memory lead to the storing of less active data to the Windows page file (swapping). At the same time, it is also possible that programs experiencing errors require even more memory resources, decreasing the size of the file cache and potentially leading to system crashes. In a case such as this one, Windows has no defined minimum file cache size.

This behavior is paradoxical to the actual purpose of the file cache, leading to substantially reduced performance and instability. Only up until recently it was not even possible for users to influence this behavior because Windows did not have any standard mechanisms for this purpose.

What does O&O CleverCache do?

O&O CleverCache solves this problem by taking control of the resource management for file caching and applications. With O&O CleverCache, applications can allocate memory without forcing Windows to swap. This increases performance and lowers response times, especially when running many applications simultaneously. Our tests have shown that systems can run up to twice as fast with O&O CleverCache as without it. Server systems also show increased performance in processing high volumes of file (common in database applications).

With O&O CleverCache, you also have the ability to manually customize the file cache settings to meet your specific needs. Some specific applications could be gaming, server operations, or the editing of video material.



Increased Memory Performance with O&O CleverCache

The figure above illustrates the cache problem and how O&O CleverCache can help. Clearly marked are two progressions of used memory resources during the loading of a large file, one with O&O CleverCache in operation and one without. This graph is an accurate representation of how a system's memory resources behave when video editing software is in use. Here it is clear to see how a system running without O&O CleverCache will steadily lose available resources as time goes on. On the other hand, the rate at which the memory resources are consumed on those systems running O&O CleverCache plateaus after a specific value is reached. The remaining available resources can then be allocated for the operation of other applications, avoiding the swapping of files and sagging performance.

The optimal level for the file cache is determined by O&O CleverCache without any need for user input, adjusting itself to a system's specific hardware requirements automatically. In this way, O&O CleverCache can quickly and easily rediscover the unrealized potential on any system, leading to increases in performance.

Automatic Optimization in the Background

O&O CleverCache is a Windows service that is automatically installed and configured generally without any need for manual manipulation of the software's settings. Whenever the system is booted, this service is automatically started. When the service has been correctly started, a small icon shaped like a light bulb will appear in the task tray next to the system clock found in the bottom right hand corner of the screen.

O&O CleverCache automatically selects the best settings for the optimal utilization of the memory resources.

If you would like to change the settings for O&O CleverCache, start the software from the program group entitled **O&O Software** in the Start menu or by way of the **Control Panel**. If O&O CleverCache is already running, simply right-click on the light bulb icon mentioned above and select the heading **Control Center**.

More detailed descriptions of the settings found in the Control Center, can be found below in the section entitled "O&O CleverCache Control Center".

Example: The "Server Problem"

If you use a Windows Server for days, weeks, or even months at a time without interruption, slower answering times of applications will occur. By restarting the server, you will find out that the system runs with significantly higher performance. The reason for this is the empty file cache resulting from the reboot of the system. O&O CleverCache achieves the same result without any reboot, ensuring that maximum performance while the system is online. In addition to other functions, O&O CleverCache 6 also contains "Mem-O-Safe" technology. This enables user control of the file cache's update interval. In Windows, the file cache is not only useful for reading files, but for writing them as well. In order to improve system performance, saved data is not immediately written to a secondary storage medium (i.e. hard disk), but rather first stored to the file cache. For the sake of efficiency, the system waits a specific interval of time in order to save as many updates to files as possible at once. Normally, this interval cannot be changed by the user. O&O CleverCache, however, makes this possible. This technology can ensure that, even on the most important of file servers, only few to no files will be lost in the event of a system failure (program crash, hardware malfunction, power outage, etc.).

Example: "Editing Large Files"

System activities that require the constant accessing of files on the hard disk can be susceptible to performance losses due to inefficiency in the way the file cache operates. Particularly when using applications that require a large amount of memory, it is recommended that you try out O&O CleverCache on your system. Desktop Publishing and graphical applications, CAD and video capturing applications are typical examples for such applications. To see exactly how much O&O CleverCache 6 can help, please try the following: After the trial software has been installed onto your computer, right click the icon in the task tray to

activate the context menu. Then select the heading **Agent** and then **Pause**. Compare the performance of your system before and after O&O CleverCache 6 has been activated.

Example: “Multitasking with Multiple Applications”

Multitasking is commonplace in Windows. Users will minimize an application window to the taskbar and leave it to run in the background while another application is in use. This is especially the case with users of Office applications who often switch between different Office applications at a high frequency. But even if the application is minimized it still continues to use main memory resources, possibly consuming file cache resources as well. Using O&O CleverCache 6 significantly reduces the cache resources and thus increases available main memory resources. This results in much faster response times for the active applications.

About Licensing

O&O CleverCache 6 may be tested for 30 days free of charge and obligation. The remaining time left in the trial period is displayed when the program starts in the Registration Assistant dialog.

O&O CleverCache is licensed per computer. This means that it is necessary to purchase a license for every computer, on which you plan to install O&O CleverCache. A single license may not be installed on more than one computer at a time.

If you are interested in using O&O CleverCache in your company or as a technician to provide a service to customers, please contact one of our Authorized Dealers or our Sales Team to get more information on specialized licensing that meet your needs.

Installation and System Requirements

System Requirements

Operating Systems

O&O CleverCache is compatible with:

- Windows NT 4 Workstation and Server (Service Pack 6 and Microsoft Internet Explorer Version 5.01 or later installed)
- Windows 2000 Professional, Server, and Advanced Server
- Windows XP Professional and Home Editions
- Windows Server 2003 (all versions)
- Windows Vista

Access Privileges

In order to install and run O&O CleverCache, it is necessary for you to be a member of the local administrator group or possess an equal level of privileges. If you are a domain administrator, then you usually possess the adequate level of access.

Installation

The installation of O&O CleverCache is very easy. Please follow the steps described below:

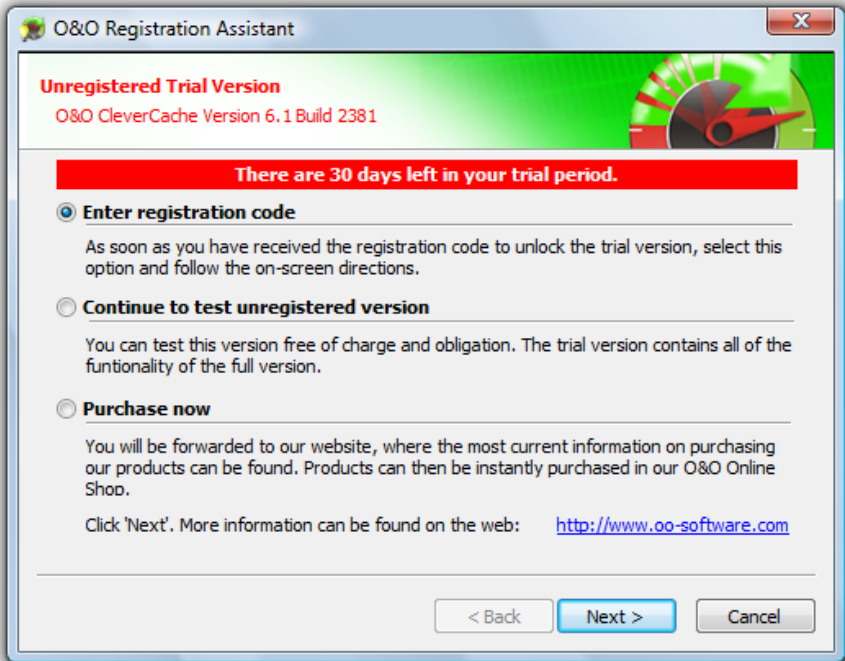
1. Start the computer on which you would like to have O&O CleverCache installed.
2. Start the O&O CleverCache installation file (SETUP.EXE) that you either downloaded from our server or received on one of our software CDs.
3. After the setup program has successfully been installed, please follow the on-screen directions.
4. During the installation process you will be asked to decide which users will be allowed access to use O&O CleverCache. You will have the choice between the current user or all users. Please note that the O&O CleverCache Control Center cannot be started by users with limited privileges. However, O&O CleverCache Agent will run in the background for all users.
5. After installation has completed, the O&O CleverCache Agent will automatically be started, after which the main program interface will appear (**O&O Control Center**).

If a previous version of O&O CleverCache is already installed on your computer, it is necessary that you first remove this version, before installing the new version.

If you experience an error during installation prompting you to exit the setup program, please contact our Technical Support.

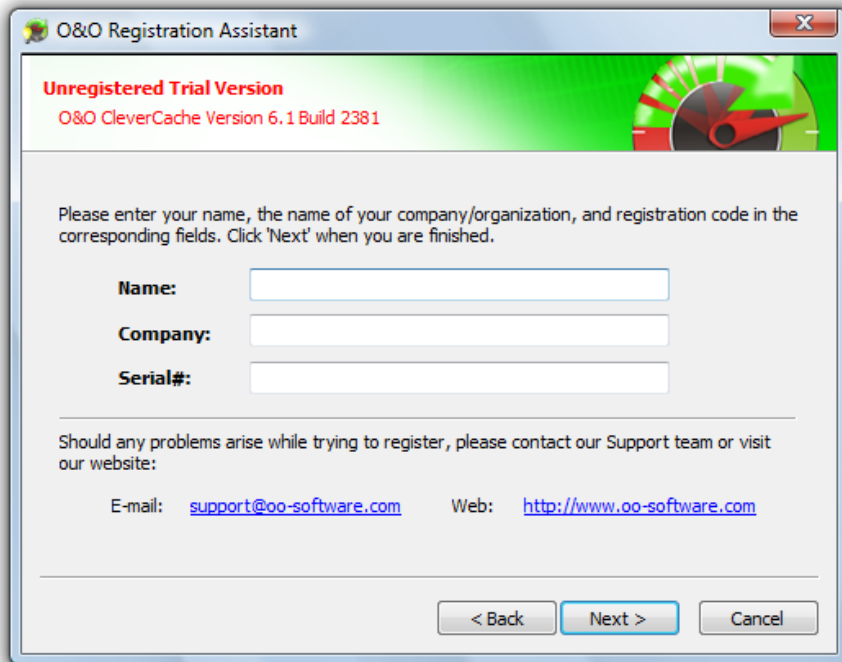
Registration

The first time you start O&O CleverCache you will be asked to register and enter your license key. You also have the possibility of testing O&O CleverCache free of charge for 30 days. By clicking **Purchase now**, you will be forwarded to our website where you can find current information concerning the purchase of our products. There you can purchase products in the O&O Online Shop or be connected to partners near you who can then handle your requests.



O&O Registration Assistant

To register O&O CleverCache you will need the registration code you received after you purchased the product. This registration code is also referred to as the license key, license code, serial number, serial#, or product ID.



O&O Registration Assistant; Entering the Registration Data

The Registration Assistant allows a simple registration process. When you click on **Enter Registration Code**, a dialog box will appear. In the registration dialog you can enter your registration code that you received when you purchased O&O CleverCache. Please make sure that you do not confuse the letter “O” with zeros or enter in any empty spaces.

Important:

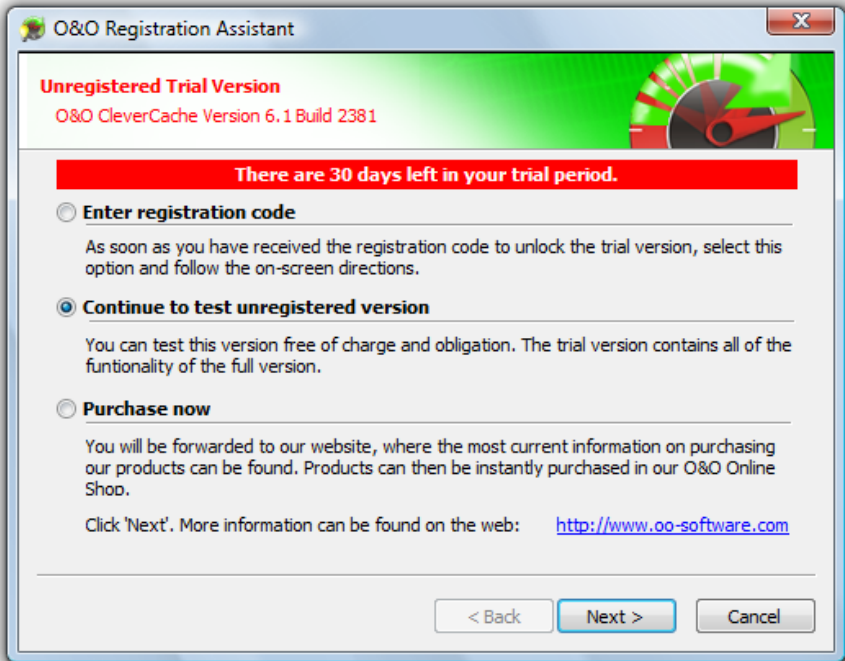
- If you received your registration data by e-mail, please make sure to fill out the fields labeled **Name** and **Company** exactly as they appear in the e-mail.

Click **Next** to save the information entered or **Cancel** to abort registration and close the dialog. If the information you entered is not correct, the registration assistant will appear the next time O&O CleverCache starts.

Should you encounter any problems entering your registration information, please do not hesitate to contact our Technical Support.

If you would like to remove O&O CleverCache from your system, then please follow the directions described in the section below entitled “Uninstallation”.

Unregistered Trial Version



O&O Registration Assistant; using the unregistered version of O&O CleverCache

As long as you continue to use the unregistered trial version, this window will appear whenever O&O CleverCache starts. The time remaining in the trial period is displayed at the top of the dialog.

Clicking **Purchase now** will forward you to our website where you can find current information concerning the purchase of our products.

Select the desired action and click **Next**. Registration can be canceled at any time by clicking the **Cancel** button and then **OK** when you are asked to confirm.

Uninstallation

To remove O&O CleverCache from your System, open the **Control Panel** located under the heading **Settings** in the Start Menu and click on **Software**.

Please select **O&O CleverCache** from the list of installed software and click on the **Add/Remove...** button.

Confirm the uninstallation of O&O CleverCache. After this process is completed, a dialog box will appear confirming this. O&O CleverCache is now removed from your system.

Getting Started

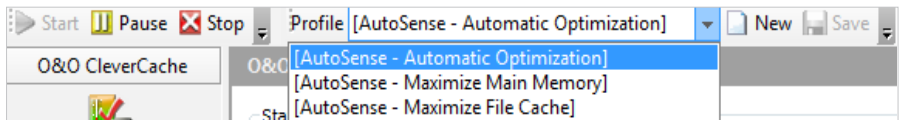
Running O&O CleverCache in the Background

O&O CleverCache is designed to work quietly in the background. After the installation has successfully been completed, the program window will automatically be opened, allowing you to check through the software's settings and take a look at your system's performance statistics. When you decide to close the window, you will be notified that the Agent will continue to run and optimize your system in the background.

O&O CleverCache analyzes the hardware configuration of your system and chooses the most optimal settings accordingly. It is not necessary for you to make any additional changes to O&O CleverCache, as the initial settings will immediately allow you to reap the maximum performance out of your system. To monitor the extent to which those new settings have increased performance, O&O CleverCache also offers you a multitude of individual performance statistics.

Customizing the Most Important Settings

If you would like to modify the **default** settings in O&O CleverCache, it is first necessary that you create a new Profile. To do so, click **New** in the Quick Toolbar located above the main window.



Quick Toolbar

Program settings can be reset to their default values at anytime. To do so, simply click **Load Default Settings** from the **Settings** Menu. Doing this will delete all profiles and changes made since the program's installation, resetting the software to its original configuration.

Basic Settings in O&O CleverCache

As soon as your new Profile has been created, you can start modifying your cache settings by clicking on the icon labeled **File Cache** under the heading labeled **Settings**.

Four slide bars allow you to control the minimum and maximum amounts of the file cache in both megabytes or as a percent of the total memory available. In addition, you also have the ability to adjust the file cache assessment interval, the rate at which data in the file cache memory is examined and saved to the hard drive.

Through the Cache Monitor located under the heading **O&O CleverCache** on the left-hand side of the main window, you can examine the current status of your memory use and your file cache.

Mem-O-Free and Mem-O-Safe

The options **Mem-O-Free** and **Mem-O-Safe** can be found beneath the heading labeled **Settings**. As is the case with other O&O CleverCache settings, it is necessary to create your own profile when making changes to these features. Whenever the pre-defined O&O AutoSense profile is active, these settings are deactivated.

Mem-O-Free gives you the ability to control the amount of available memory. If the amount of free memory falls below the threshold set by you, Mem-O-Free automatically starts, freeing additional memory by forcing Windows to save unneeded data to the hard disk.

Mem-O-Safe is a feature designed to reduce the risk of a possible data loss in the event of a system crash. With this option, users are allowed to manually change the update interval for the Windows file cache.

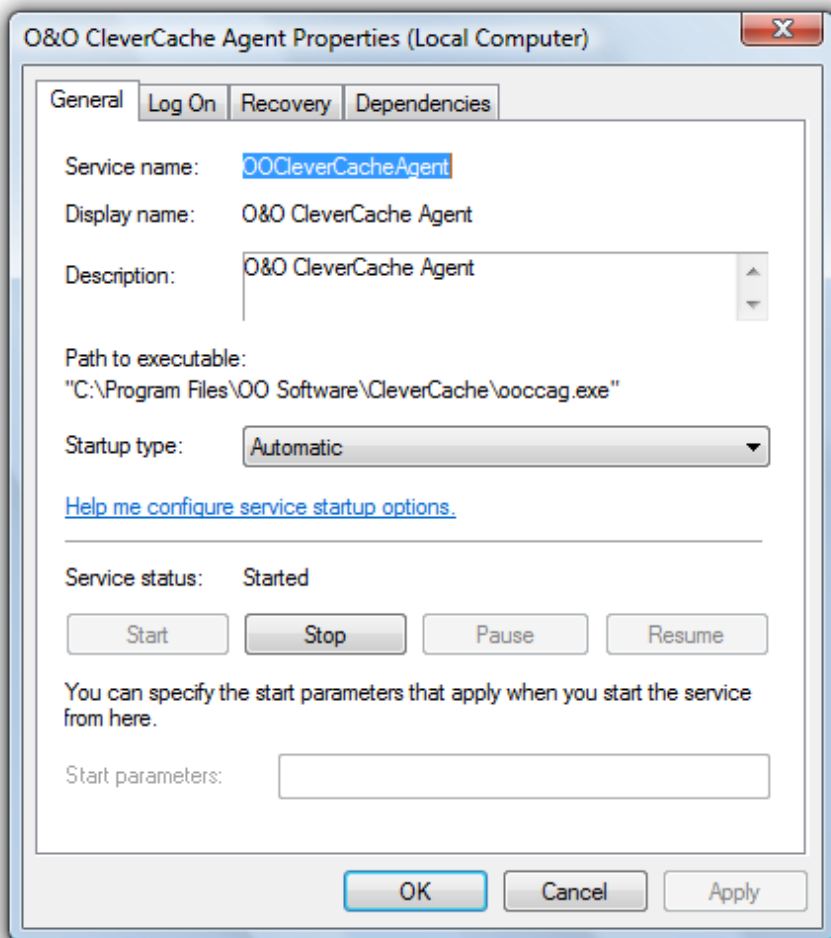
O&O CleverCache Statistics

O&O CleverCache offers you a real-time overview of the current load on your system's main memory, as well as how much is currently available. Through detailed statistical reporting, it is possible to graphically observe your main memory's progress over time. Moreover, these statistics can give you insight into exactly how much performance optimization O&O CleverCache can bring you.

O&O CleverCache Control Center

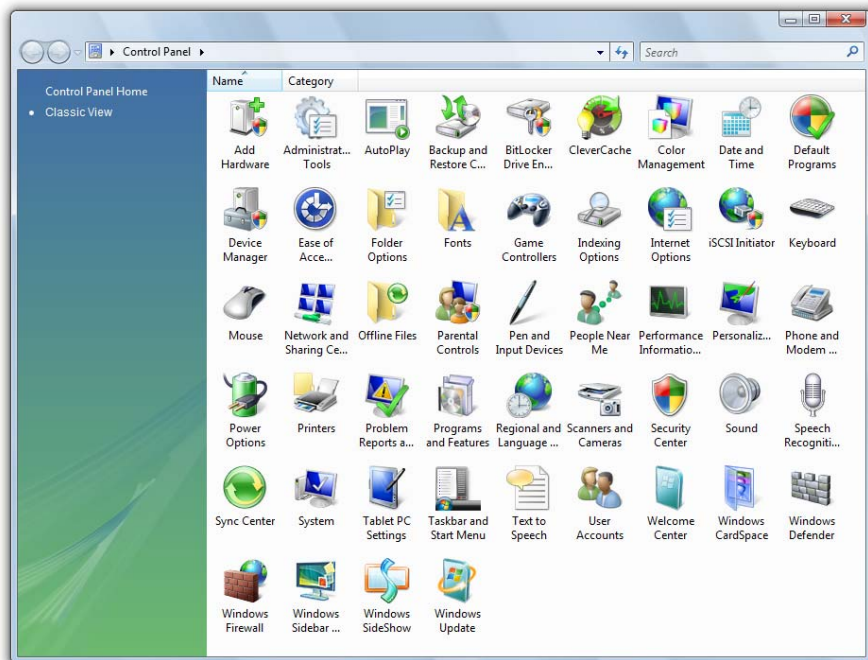
Windows Integration

The O&O CleverCache program consists of a Windows Agent, or “Service”, and a graphical interface, called the “O&O CleverCache Control Center”. After installation has completed, the O&O CleverCache Agent is configured to automatically run in such a way that no user input is necessary.



O&O CleverCache Agent Shown Windows “Service”

The O&O CleverCache Agent is integrated into the Windows operating system and is started when the system starts. After the system is tested, O&O CleverCache automatically configures itself accordingly. The software chooses the best settings for the most optimal memory usage. This means that when you are busy getting things done, the last thing you will ever have to think about is changing your memory settings.



Integration of O&O CleverCache into the Windows Control Panel

Note: After the O&O CleverCache Agent, called "Agent" in the program itself, has started, it runs quietly in the background. The graphical interface, "O&O CleverCache Control Center", only needs to be started when you wish to make manual changes to the software's settings or parameters.

O&O CleverCache Control Center Interface

If you would like to make changes to the default settings of O&O CleverCache, start the software from the program group entitled **O&O Software** in the Start menu or by way of the **Control Panel**. If O&O CleverCache is already running, simply right-click on the light bulb icon mentioned above and select the heading **Control Center**.

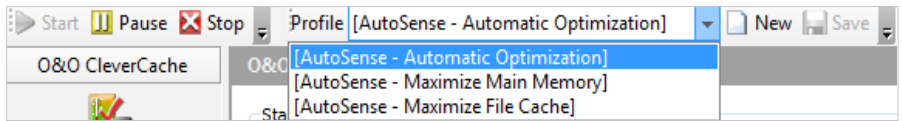
Important:

- It is possible to hide the icon located in the Task Tray, making the O&O CleverCache Agent completely into a background application. With this icon is hidden, it will then be necessary to open the O&O CleverCache Control Center to check performance and change settings.

The O&O CleverCache Control Center interface is straight-forward and simple to use. Individual functions are accessible by way of the standard menu at the top of the window or through the corresponding menu headings on the left-hand side. The Quick Toolbar gives you immediate access to both the predefined and user-created profiles and clear controls for the Agent.

Quick Toolbar

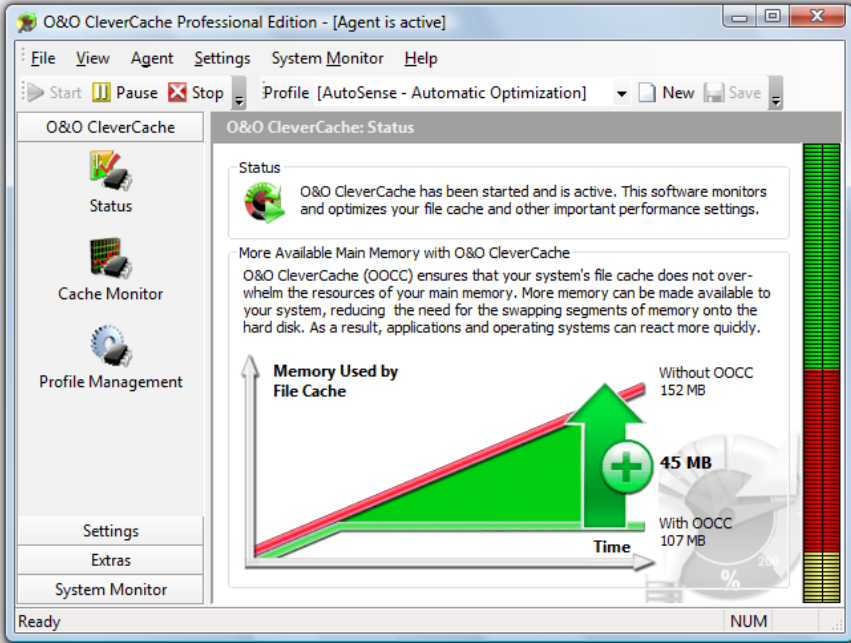
Located in the upper area of the Control Center is a toolbar where it is possible to switch between profiles, create new profiles, and save changes to the current profile in use. In addition, the buttons labeled **Start**, **Stop**, and **Pause**, can be use to control the O&O CleverCache Agent.



Quick Toolbar

The Quick toolbar can also be customized as well. Buttons can be added or removed to meet your individual needs.

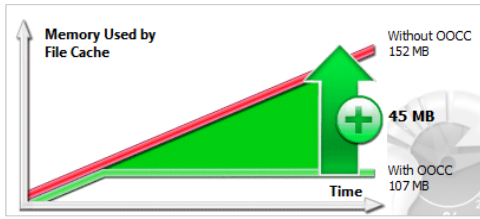
O&O CleverCache



O&O CleverCache; Status

Beneath the heading **O&O CleverCache** is the current status of the O&O CleverCache Agent displayed.

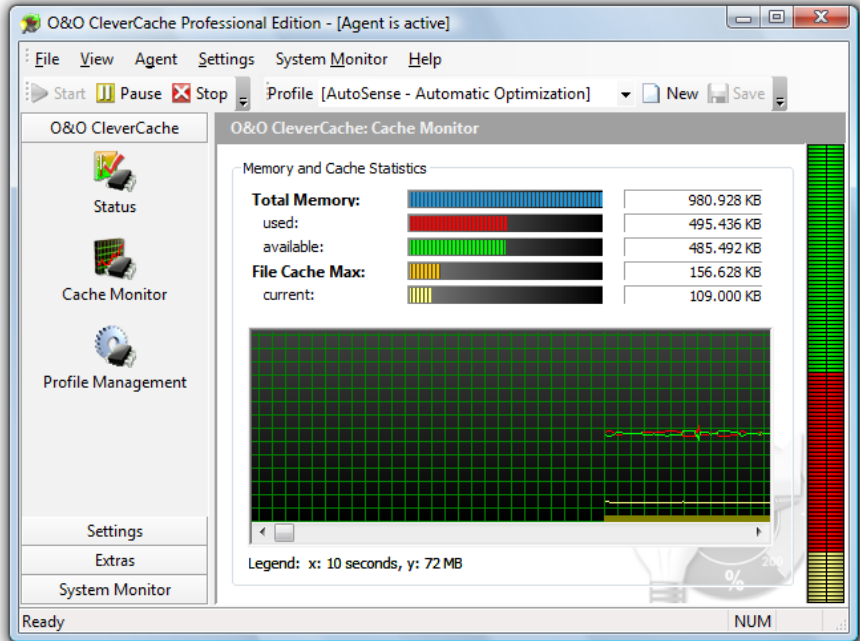
- **Started** - O&O CleverCache has been started and is active. This software monitors and optimizes your file cache and other important performance settings.
- **Paused** - O&O CleverCache is paused. Although it is still possible to monitor the behavior of your memory, all optimization processes have been halted. To reactivate O&O CleverCache, click **Start**.
- **Stopped** - O&O CleverCache has not been started. In order to start this program, you need to run the command **Start**.



Memory Performance Comparison

In this chart it is clear to see how the file cache consumption of memory can be reduced with the help of O&O CleverCache. Important to notice here is amount of additional memory that is available on your system now that O&O CleverCache is activated.

Cache Monitor



Cache Monitor

The Cache Monitor shows the current breakdown of memory usage. With up-to-the-second precision, O&O CleverCache displays the current memory use and its availability in kilobytes.

Also included in this section is the maximum allowed file cache size as well as its current usage.

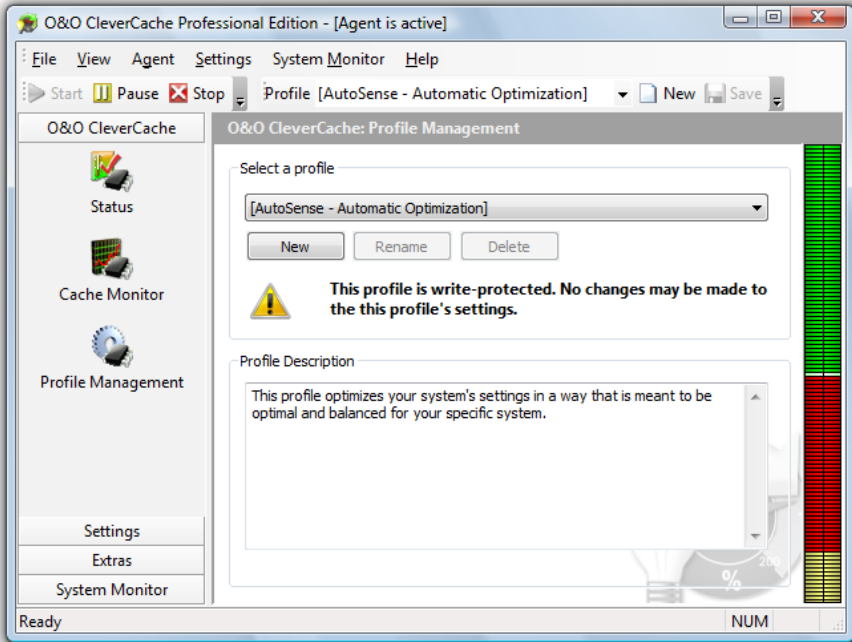
The progression of these statistics over time is also displayed graphically. A description of the units is located below the graph.

When you use the Status Monitor, the same data are displayed in the smaller status monitor window accessed through the task tray icon.

O&O AutoSense and Profiles

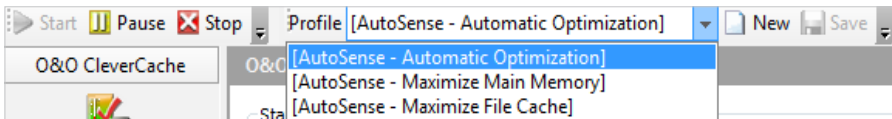
O&O CleverCache contains a number of predefined O&O AutoSense profiles meant to make working with the software even easier.

Whenever an O&O AutoSense profile is selected, your system will be analyzed on every startup for changes made to the main memory. If changes are detected, O&O CleverCache automatically will change its configuration settings to adapt to the new changes in hardware.



Profile Management

To select a profile, you can either click on **Select Profile** or select a profile straight out of the Quick Toolbar:

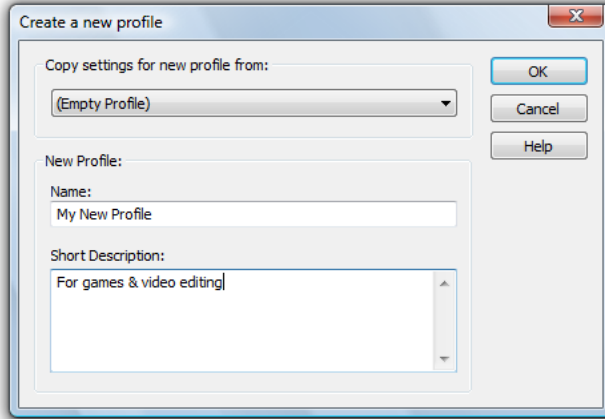


Quick Toolbar

Important:

- We strongly recommend that you use the O&O AutoSense profiles. If you decide to use your own manual settings instead, it could lead to the unintentional slowing of your system.

Creating a New Profile



Creating a New Profile

To begin making your own changes to the program settings, it is first necessary to create a new profile. In this profile the current changes can be saved and then used at a later time as you see fit.

To create a new profile, click on the button labeled **New** in the section labeled **Profile Management**. Every valid profile is required to have its own name associated with it. Although it is not required, feel free to enter a short description of the profile for your own organizational purposes.

Deleting a Profile

To delete a profile, click on **Profile Management** under the section heading **O&O CleverCache**. Select a profile out of the list and then the button labeled **Delete**.

 **Note:**

Predefined O&O AutoSense profiles may not be deleted.

Renaming a Profile

It is also possible to rename your own profiles. To do so, click on the button labeled **Rename** in the section labeled **Profile Management**. Should you try to import a profile whose name already exists, the same window will appear asking you to rename the profile you would like to import.



Note:

Predefined O&O AutoSense profiles may not be renamed.

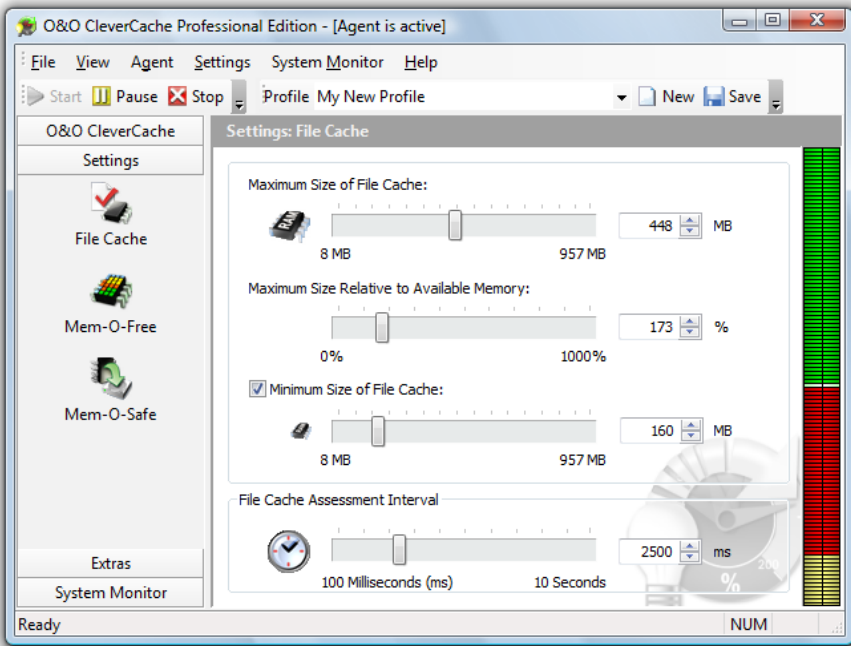
Importing and Exporting Profiles

The exporting and importing of manually-created O&O CleverCache profiles is very simple. O&O CleverCache profile filenames contain the file extension “.cpf”

To export a profile, first select the profile from the list of profiles. Please note that it is not possible to export the predefined O&O AutoSense profiles. In the menu labeled **File** select the entry labeled **Export Profile**. In the window that appears, enter the filename and saving location for the new profile file. Then click on the button labeled **Save**.

To import a profile, select the entry **Import Profile** in the **File** menu. In the window that appears, select the O&O CleverCache profile file you would like to import and then click **Open**. It is also possible to import a desired profile file (“.cpf”) simply by double-clicking on it in its respective location on the Desktop or Windows Explorer.

File Cache Settings



File Cache Settings

**Note:**

While one of the O&O AutoSense profiles is active, no changes can be made in this section. To make manual changes, however, to these settings, it is necessary to first create a profile.

File Cache Size

Using the sliders you can define a maximum cache size in both megabytes or as a percent of the total main memory. The maximum size of the file cache is either 960 MB or the full size of the main memory itself. Should you enter in both values, the smaller value of two will be used.

You can also set a minimum value for the cache in megabytes.

A more detailed explanation of the issues surrounding caching in Windows can be found in the chapter entitled “Caching Problems in Windows”.

Light System Loads

When your system experiences only minimal system loads, you can set you file cache settings very low because only a few number of files are read at any given time. Because of this, the strain on the file cache is very low.

The following is a table containing guidelines for adjusting the file cache settings according to the size of your main memory.

Size of Main Memory	Absolute Maximum	Relative to Available Memory
64 MB	24 MB	100%
128 MB	48 MB	150%
256 MB	96 MB	150%
512 MB	192 MB	200%
1 GB	348 MB	200%

Normal System Loads

For systems with normal system loads, it is recommended to you utilize one of the O&O AutoSense profiles. This will take care of all of the necessary adjustments.

The following is a table containing some clues regarding the file cache settings according to the size of your main memory.

Size of Main Memory	Absolute Maximum	Relative to Available Memory
64 MB	40 MB	100%
128 MB	88 MB	100%
256 MB	176 MB	100%
512 MB	352 MB	100%
1 GB	704 MB	100%
2 GB	960 MB	100%

Heavy System Loads

If your PC or server experiences heavy system loads as a result of activities such as video editing, graphics, database, or real-time applications, it is important to consider how often and how many files are read and written on your system.

The following is a table containing guidelines for adjusting the file cache settings according to the size of your main memory.

Size of Main Memory	Frequency of Data Access	Absolute Maximum	Relative to Available Memory
128 MB	Low	32 MB	50%
128 MB	Often	48 MB	100%
256 MB	Low	64 MB	100%
256 MB	Often	96 MB	150%
512 MB	Low	128 MB	100%
512 MB	Often	192 MB	200%
1 GB	Low	192 MB	100%
1 GB	Often	348 MB	200%
2 GB	Often	384 MB	100%
2 GB	Often	768 MB	200%

File Cache Assessment Interval

O&O CleverCache monitors the use of the file cache in Windows in defined intervals. These intervals can be adjusted between 100ms and 10s.

The default value is 2.5 seconds (2500 ms), meaning that every 2.5 seconds the file cache is reassessed. Generally, this default interval is fine for normal operation. However, if you would like to change this assessment interval, select a number between 100 and 1000 ms. Please remember that too low a value can lead to a surplus load on limited resources. For this reason, this variation is only recommended on heavily loaded systems to deal with the high rate of reading and writing.

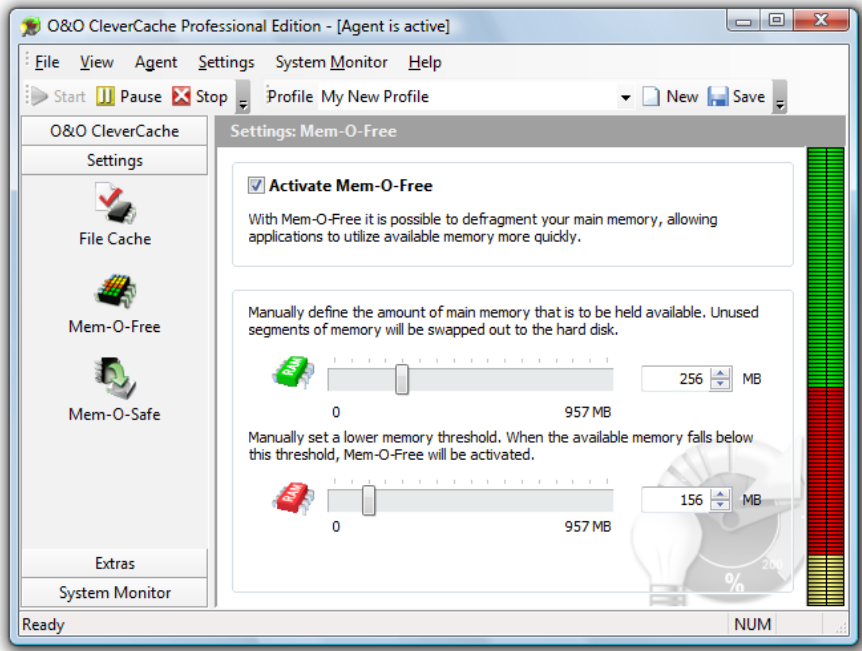
If the load on your file cache is light, it is possible to increase the assessment interval to a higher value. Because the intervals are no longer so short, however, the file cache may need to rise temporarily above the maximum value set by the user.



Note:

Do not change the default settings, if you are not completely aware of the potential consequences of those changes.

Mem-O-Free



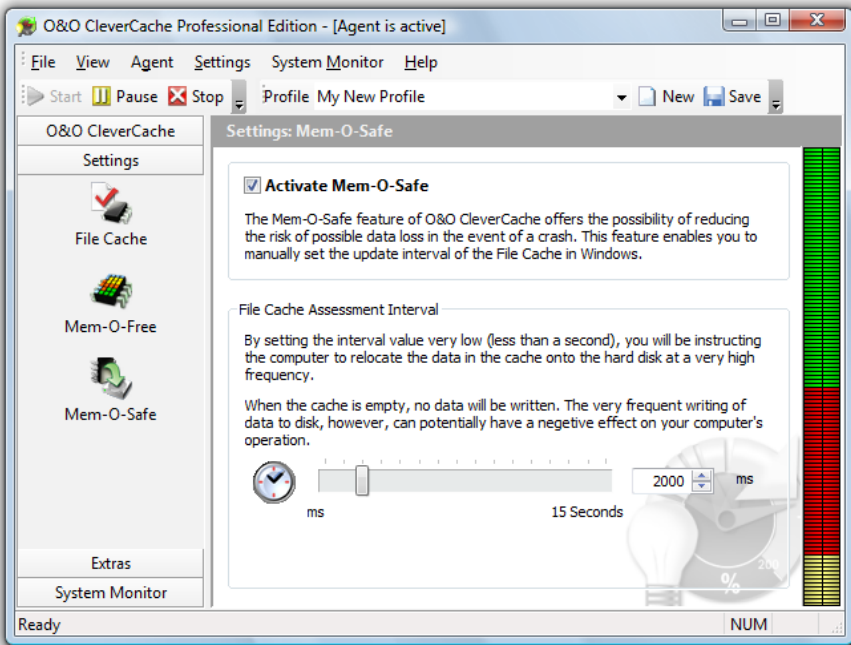
Mem-O-Free Settings

Note:
If you are using one of the O&O AutoSense profiles, it is not possible to make any changes to the settings. If you would like make manual changes, however, it is first necessary that you create your own profile.

In the section labeled **Mem-O-Free**, you have the ability to define a lower memory threshold. When the amount of available memory falls below this threshold, extra reserved segments are released for use. How much memory is to be released can also be set.

Mem-O-Free enables you to control the amount of main memory available for use during normal Windows operations. Whenever the amount of free memory becomes scarce and falls below a predefined threshold, Mem-O-Free is started. Once active, Mem-O-Free frees a set number of memory segments, from which unneeded data have been swapped to the hard disk.

Mem-O-Safe



Mem-O-Safe Settings

**Note:**

If you are using one of the O&O AutoSense profiles, it is not possible to make any changes to the settings. If you would like make manual changes, however, it is first necessary that you create your own profile.

The **Mem-O-Safe** feature in O&O CleverCache reduces the risk of possible data loss in the event of a system crash. This reduction in risk is achieved by allowing users to manually set the assessment interval for the file cache in Windows.

Before your data is written to the hard disk, they are first written to the file cache. The rationale behind this design is efficiency. Because the constant writing of small amounts of data to disk would not be an efficient use of time, this system was developed to optimize the process and overall performance. For this reason, Windows saves data to disk in intervals, so that the system can economize on the amount of data saved at once.

This interval, although defined by Windows, is not set in stone. It is determined according to a number of factors: the size of the file cache, the system speed, and results of the last write process. Generally, this interval is anywhere between 4 and 15 seconds.

If a system crash happens to fall between those intervals (e.g. program error, accidental shutdown, or power outage), data stored in the file cache is lost forever.

If you would like to increase the frequency by which data is written from the buffer to the hard disk, you will need to reduce the size of the update interval. The minimum interval length is 50 milliseconds.

**Important:**

- If you set the interval value to low (less than a second), you will be instructing the computer to save data to disk with a very high frequency. On the other hand, should this value be set too high, system performance will increase. However, along with higher performance, the risk of data loss in the event of a system crash also increases.

Extras

In the section **Extras**, on the left-hand side of the Control Center, a few additional functions give you more ways to optimize and accelerate your system. The settings can be used to increase the overall performance of your PC.

**Important:**

- Please note that these settings will not be saved in a profile but rather will be immediately applied to your system.

Processor Time

These settings instruct Windows to favor either programs or background operations (in server applications).

There are different levels of optimization from which to choose. Depending on your preferences, the system will schedule the processor time accordingly. The faster the programs are running in the foreground, the less scheduled processor time will be allocated for other processes, making for slower background operations.

Important:

- Please note that these settings will not be saved in a profile but rather will be immediately applied to your system.

Memory Use

These settings enable you to optimize the use of the main memory on your system.

The memory can be optimized to favor either the quick execution of applications or the quick access of files.

The option **Prohibit the swapping of the kernel to disk** can be used to instruct Windows to avoid the swapping of integral operating system components to the hard disk. This can improve the performance of the operating system.

Important:

- Please note that these settings will not be saved in a profile but rather will be immediately applied to your system.

File Access

These settings allow you to accelerate the speed at which data are accessed on NTFS-based partitions.

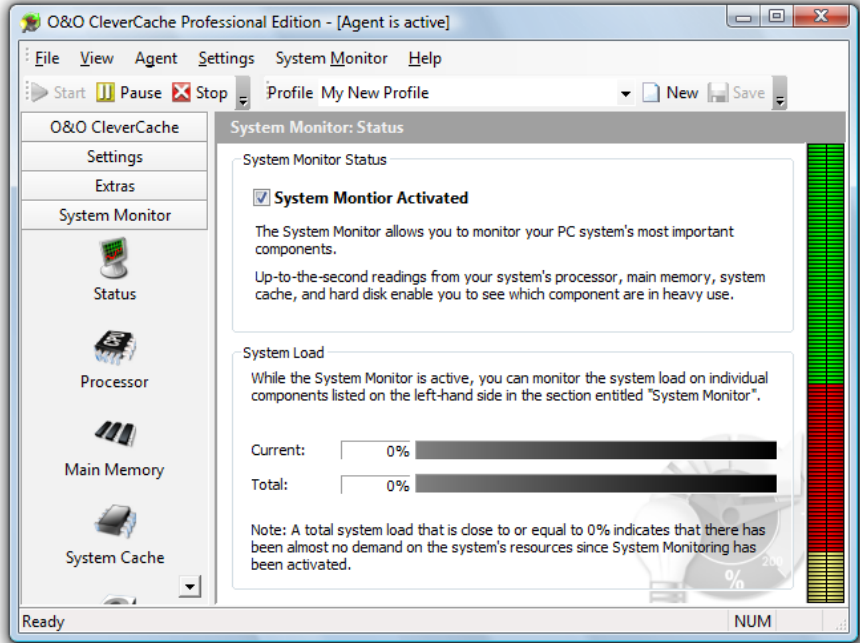
If you no longer use DOS-based applications on your computer (MS-DOS or Windows 3.1), it is no longer necessary to store **short versions of filenames** on your system. Deactivating this function can reduce the time it takes to access data on your system.

With every access of data in Windows, information regarding that access, including the date and time, are stored to disk along with the data itself. If you do not have the need for this information (which is the case for most people), you can use the option **Do not save 'last accessed' information for directories** to save time by avoiding writing and reading of unneeded file information.

System Monitor

With the System Monitor, you can monitor the performance of the most important components on your system.

Included in the System Monitor are current readings measurements from your processor, main memory, system cache and the hard disk.



Activate the System Monitor

Whenever the System Monitor is active, you can select to display statistics on all of the components listed under the heading **System Monitor**. When the System Monitor is deactivated, the component icons cannot be selected.

Note:

For the System Monitor to successfully run, it may be that additional components need to be activated. This could require the use of additional memory resources.

Processor, Main Memory, System Cache and Hard Drive

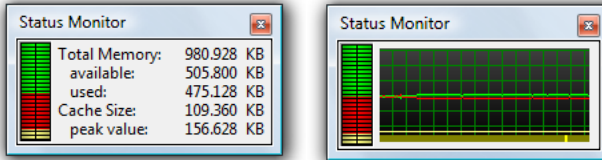
In this section, the load on the processor is measured and displayed over time as a graph. The units are explained in the legend.

The statistical values for mean, maximum, and minimum can be found below the graph.

Status Monitor

The Status Monitor in O&O CleverCache is a small window that displays the most important statistics, even when the Control Center is closed.

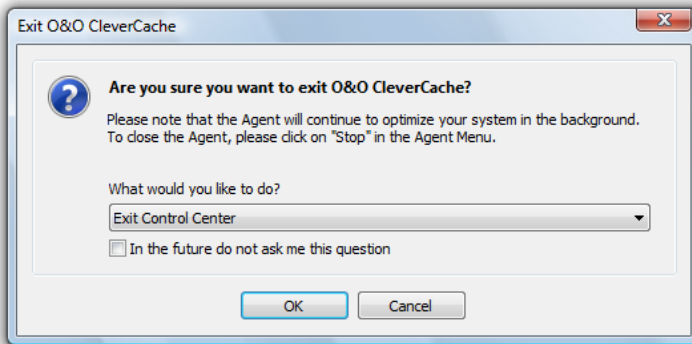
In the System Monitor, you can see the very same statistical data and graphs as in the Cache Monitor located in the Control Center.



Status Monitor

The Status Monitor settings can be modified to be displayed **always on top** of other active windows, to always align, or **snap**, to the edge of the screen, or to have varying levels of transparency. All of these options are available by right-clicking on the O&O CleverCache icon in the task tray.

Closing the O&O CleverCache Control Center



Closing the O&O CleverCache Control Center

When you try to close the O&O CleverCache Control Center, a window will appear giving you three options concerning how you would like to close O&O CleverCache:

- **Minimize Control Center to the Task Tray:** The O&O CleverCache Agent will continue to run in the background and optimize your system. Although the O&O CleverCache Control Center will disappear from the screen, it can be reopened at any time.

- **Exit Control Center:** The O&O CleverCache Agent will continue to run in the background and optimize your system. Although the O&O CleverCache Control Center will disappear from the screen, it can be restarted at any time.
- **Close Control Center and Stop Agent:** Your system will no longer be monitored and optimized.

If you do not want to answer this question again, simply select one of the three options, check the box labeled **In the future do not ask me this question**, and then click **OK**. This procedure will instruct the software to choose this desired option every time you close the Control Center.

Support and Contact

Technical Support

To receive more information about O&O CleverCache 6, please visit our website, www.oo-software.com, and get the latest information about product developments and support. Also included on our website are regularly updated FAQs and Knowledge Bases that offer the most common problems and questions regarding our products.

All registered customers receive installation and product support free of charge for the first 90 days after registration. When contacting our support department, please do not forget to have your registration code ready.

In addition, it may be helpful to read our frequently asked questions (FAQ) section of our website before you contact our support department. It is always possible that your specific question or problem may have already been addressed.

Authorized Resellers

For answers to all questions regarding the licensing and purchase of our software products, our authorized distribution partners in over 30 countries stand ready to assist you. Their names and addresses may be found at our website under the 'Purchase' heading. We would also be more than happy to assist you in finding the partner closest to you.

O&O Software GmbH
Am Borsigturm 48
13507 Berlin
Germany

Tel +49 (0)30 4303 4303
Fax +49 (0)30 4303 4399

E-mail info@oo-software.com
sales@oo-software.com

Web www.oo-software.com

End-User License Agreement

IMPORTANT – PLEASE READ CAREFULLY

This end-user license agreement is a legally binding contract between yourself (as a natural or a legal person) and the company O&O Software GmbH (O&O) for the software product named above. By installing the software product, you declare your agreement with all conditions of the license agreement.

If you do not agree with the conditions of the license agreement, you are not entitled to install or use the software product. Should this be the case, you can return the software product along with a copy of the invoice or receipt to the distributor from whom the product was purchased in exchange for a full refund.

The software product is protected by copyright laws and international copyright contracts as well as other laws and agreements concerning intellectual property.

1. Subject of Contract

The subject of this contract is the computer program, the description thereof and the user manual as well as any other accompanying written material. This will henceforth also be referred to as "software".

O&O wishes to point out that, at the current state of technology, it is not possible to create software that works perfectly in all applications and combinations. The subject of this contract is therefore a software program that is fit for the purposes detailed in the description and the user manual.

2. Granting of License

For the duration of this contract, O&O grants you the simple, non-exclusive and personal right (henceforth referred to as "license") to use a copy of the software on a single computer. If this single computer has multiple users, this user right applies to all users of the system.

As a license-holder, you may physically transfer the software (i.e. saved on a data carrying medium), on condition that it not be used on more than one computer at a time. Further use, especially repeated installation, use, and subsequent uninstallation on various computers (floating license) is prohibited.

The software product may only be used on the operating system type corresponding to the version number.

(a) O&O CleverCache 6 Professional Edition

You are entitled to install and use the software product on a computer with one of the following operating systems: Microsoft Windows NT 4 Workstation or Microsoft Windows 2000 Professional Edition or Microsoft Windows XP (all editions) or Windows Vista.

(b) O&O CleverCache 6 Server Edition

In addition to the operating systems mentioned in 2 (a), you are entitled to install and

use the software product on a computer with one of the following operating systems: Microsoft Windows NT 4 Server or Microsoft Windows NT 4 Server Terminal Server Edition or Microsoft Windows 2000 Server or Microsoft Windows 2000 Advanced Server or Microsoft Windows Server 2003 (all editions).

(c) O&O Clever Cache 6 – Trial Version

You are entitled to test the software free of charge and without obligation for a period of 30 days. If you wish to continue using the software after this 30 day period, you must purchase the relevant license.

3. Description of Additional Rights and Limitations

The license-holder is prohibited from:

- (a) Altering, translating, reverse-developing, decompiling or disassembling the software without the advance written permission of O&O
- (b) Creating products derived from the software or making copies of the written material, translating or altering the written material or creating products derived from the written material
- (c) Distributing copies of the software to third parties
- (d) Changing or removing the copyright mark on the copies of the software
- (e) Renting out, - or lending the software

The license holder is permitted to transfer all rights from this license agreement permanently to another person, provided that the recipient also agrees to all conditions of this license.

The license holder must use the software only in compliance with all relevant laws.

4. Ownership of Rights

Any ownership rights applying to the software, including but not limited to copyright laws, belong to O&O. Any not explicitly claimed rights are reserved by O&O.

The purchase of a license for a product simply grants a right to use the software as described in the conditions of the license agreement. This does not imply a right to the software itself. In particular, O&O reserves all publication, multiplication, processing and utilization rights to the software.

5. Reproduction

The software and accompanying written material are protected by copyright laws. The user has the right to create copies of the software for back-up and archiving purposes. He or she is thereby also obliged to reproduce O&O's copyright mark on the physical medium or in the program. A copyright mark present in the software may not be removed. Copying or reproducing the software in original or altered form, or merged with or included in other software, is explicitly forbidden.

Provided you pass on only the test version, you may reproduce the installation data as often as you wish. However, you may only pass on exact copies and may not alter these in any way.

For such reproduction, you may not demand any kind of compensation. You may not distribute or market this product in combination with other products - whether commercially or non-commercially - without the advance written permission of O&O.

6. Length of Agreement

This agreement is valid indefinitely. The right of a license-holder to use this software is removed automatically and without notice if he or she violates one of the terms of this agreement. At the end of the period of right to use, the license-holder is obliged to destroy the software, all copies of the software, and the written material.

7. Compensation for Breach of Contract

O&O would like to point out that you are responsible for any damages arising from breach of copyright if you violate these contract terms.

8. Changes and Updates

O&O is entitled to update the software as it wishes. O&O is not obliged to make updated versions available to license holders who have not registered their product with O&O, or who have not paid the update fee. Any additional software code that is made available to you as an update is considered a part of the software and is therefore subject to the terms of this agreement.

9. O&O's Guarantees and Responsibilities

- (a) O&O guarantees the original license-holder that the data medium carrying the software is free of errors at the point of delivery, assuming normal operating conditions and a normal level of maintenance.
- (b) If the delivered data carrier is faulty, the purchaser can demand a replacement during the 24-month guarantee period. For this, he or she must return the data carrier, any back-up copies and the written material along with a copy of the invoice or receipt to O&O or to the dealer where the product was purchased.
- (c) If a fault as described in clause 9 b is not corrected by means of a replacement delivery within a reasonable time period, the purchaser can demand either that the sale price be reduced or that the contract be canceled.
- (d) For these reasons and for those mentioned in clause 1 of this contract, O&O accepts no responsibility for mistakes in the software. In particular, O&O does not guarantee that the software will meet the particular requirements and demands of the purchaser or that it will function together with other software he or she has chosen. The purchaser is responsible for the correct choice of software and the consequences of the use of that software, as well as the results aimed at or intended. The same principle applies to the written material that accompanies the software. If the software is fundamentally unfit for use as described in clause 1, the customer has the right to cancel the contract. O&O has the same right should the creation of software that is fundamentally fit for use as described in clause 1 not be practically possible.
- (e) O&O is not responsible for any damages, unless such damages are caused deliberately or arise from gross negligence on the part of O&O. In contracts with traders, an assumption of responsibility for gross negligence is excluded. This does not apply to assurances by O&O that refer to specific characteristics. Responsibility for damages not included in such an assurance will not be accepted.

10. Competency

If the license-holder is a registered merchant under German law, the law that applies to this contract is the law of the Federal Republic of Germany. In this case, the state and federal courts of the Federal Republic of Germany assume responsibility.

If you have any questions regarding the licensing of O&O software or you wish to contact O&O, please get in touch with us as follows:

O&O Software GmbH
Am Borsigturm 48
13507 Berlin
Germany

Tel +49 (0)30 4303 4303

Fax +49 (0)30 4303 4399

E-mail info@oo-software.com

sales@oo-software.com

Web www.oo-software.com