Blancco File Eraser
Certified and approved for Windows 8.1, Windows 8, Windows 7, Windows Vista and Windows XP.
Abstract

This is the official Blancco File Eraser User Manual. Blancco is the proven data erasure solution for millions of users around the world. As the pioneer and global leader in data sanitization and end-of-lifecycle solutions, the company offers the most certified data erasure within the industry.

Deleting files with Windows commands does not actually remove the data. Blancco File Eraser permanently erases data and files from servers, desktops and laptops and related storage while they are active. The user-friendly Blancco File Eraser graphical user interface makes day-to-day data erasure easy.

For centralized reporting or to implement automatic erasing routines through scheduling or using command line integration, please see the Blancco File Eraser Administrator’s Manual.
## Definitions

<table>
<thead>
<tr>
<th>Item</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>File</td>
<td>A file is stored on a computer as a piece of information or resource for storing information, which is accessible by a program. Its main function is to store data under a specified name.</td>
</tr>
<tr>
<td>Free Disk Space</td>
<td>Free Disk Space is essentially unused disk space that comprises a lot of information out of sight from the regular user, although files that have been previously “deleted” can still be recreated from free disk space on a drive.</td>
</tr>
<tr>
<td>HTML</td>
<td>HTML, which stands for Hyper Text Markup Language, is the predominant markup language for web pages. It provides a possibility to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists etc., as well as for links, quotes, and other items.</td>
</tr>
<tr>
<td>Recycle Bin</td>
<td>Files and folders frequently end up in the recycle bin for the disposing of sensitive information. Therefore, the recycle bin can be a goldmine for anyone interested in recreating data from a computer.</td>
</tr>
<tr>
<td>System Files</td>
<td>Different programs create a lot of extra data (system files) that are left as back-up information while working with the program. These files are regularly not known or seen by the user.</td>
</tr>
<tr>
<td>XML</td>
<td>eXtensible Markup Language is a markup language that defines a set of rules for interpreting documents.</td>
</tr>
</tbody>
</table>
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1 About file erasure

One aspect of computer security that is often overlooked is how information is stored on different storage media. Research has proven that it is dangerously easy to recover information that was thought to be deleted from hard disks. The only way to completely remove data from a hard drive is to overwrite that information with new data. Because physical destruction of a hard drive is relatively complicated and unsatisfactory, it is often preferred to Erase hard drive information by intentionally overwriting that data with other data so that the original data cannot be recovered.

1.1 Structure of hard disk

Hard disk is the computer’s primary storage medium. The disk surface is divided into concentric tracks. The thinner the tracks are, the more storage. The tracks are further divided into sectors. In order to update the disk, one or more sectors are read into the computer, changed and written back to the disk. The operating system figures out how to fit data into these fixed spaces. The File Allocation Table, a part of the DOS, Windows and OS/2 file system, keeps track of where data is stored on the disk. The directory list, which contains the file name, extension, date, etc., points to the FAT entry where the file starts.

1.2 How to erase data

One method of removing data from your hard drive is by using the built-in features of the operating system, e.g., emptying the recycle bin or using DEL in the terminal. Unfortunately, this will only affect the File Allocation Table (FAT). That means that the information is still stored on the hard disk and it is therefore possible to recover that information.

By intentionally overwriting data on your hard disk with new data, it is possible to prevent the original data from being recovered. The number of times and byte patterns that should be used for overwriting the original data are determined by different approved erasure standards and algorithms.
1.3 Levels of information

There are several different levels of information stored on your hard disk. These include:

*Regular files* - Information contained in the file system. This includes file names, file attributes, and file contents.

*Deleted files* - When a file is deleted from a file system, the operating system does not overwrite the blocks on the hard disk that the file is written on. Instead, they simply remove the file’s reference from the File Allocation Table.

*System files* - Temporary files, including print spooler files, browser cache files and files for “helper” applications. Most users either expect the system to automatically delete this data or are not even aware that it exists.

*“Free Space”* - Includes information in slack space, backing store for virtual memory, and old data that has been partially overwritten. Blancco File Eraser allows erasure of file slack, namely the space that exists from the end of the file to the end of the last blocks of data assigned to the file.

**Tip:** Make sure that you run the “Erase Free Disk Space” operation regularly in order to prevent data leaks.

1.4 Erasure algorithms

<table>
<thead>
<tr>
<th>Erasure Algorithm</th>
<th>Number of Overwriting Rounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMG Infosec, Lower standard (DEFAULT ALGORITHM)</td>
<td>1</td>
</tr>
<tr>
<td>HMG Infosec, Higher standard</td>
<td>3</td>
</tr>
<tr>
<td>Peter Gutmann’s Algorithm</td>
<td>35</td>
</tr>
<tr>
<td>U.S Department of Defense Sanitizing (DoD 5220.22-M)</td>
<td>3</td>
</tr>
<tr>
<td>Bruce Schneier’s Algorithm</td>
<td>7</td>
</tr>
<tr>
<td>Navy Staff Office Publ.</td>
<td>3</td>
</tr>
<tr>
<td>NCS Center</td>
<td>4</td>
</tr>
<tr>
<td>Air Force System Security</td>
<td>4</td>
</tr>
<tr>
<td>US Army</td>
<td>3</td>
</tr>
<tr>
<td>OPNAVINST 5239.1A</td>
<td>3</td>
</tr>
<tr>
<td>NSA 130-1</td>
<td>3</td>
</tr>
<tr>
<td>DoD 5220.22-M ECE</td>
<td>7</td>
</tr>
<tr>
<td>BSI-2011-VS (similar)</td>
<td>3</td>
</tr>
<tr>
<td>BSI-GS</td>
<td>2</td>
</tr>
<tr>
<td>BSI-GSE</td>
<td>3</td>
</tr>
<tr>
<td>Aperiodic random overwrite*</td>
<td>1</td>
</tr>
</tbody>
</table>

*: 1 round of overwriting with aperiodic pseudo random data.
2 Installation

Note: The user must at all times follow the guidance, procedures and practises described in the provided documentation and all guidance given by Blancco. Failing to do so might result in incorrect handling or configuration of the software, which in turn can result non-secure erasure result or incorrect configuration of the software.

2.1 System requirements
Windows 10, 8, 7, Vista and XP all versions.
Both 32 and 64 bit systems are supported.
Display resolution of 1024*768.

2.2 Install using a CD
1. Insert the Blancco File Eraser CD into your optical drive (CD-ROM or DVD).
2. Choose “Install” from the menu.
3. Follow the instructions on the screen.
4. Enter your personal license information when prompted.

2.3 Install using a file
1. Double-click on the installation file.
2. Follow the instructions on the screen.
3. Enter your personal license information when prompted.

Note: Deployment can also be done by using an MSI package that can be requested for delivery in case of an enterprise solution.

2.4 Uninstall the application
1. Open the Control Panel.
2. Choose “Add/Remove Programs” or “Uninstall a program” depending on your operating system.
3. Select the application you wish to remove.

Follow the instructions on the screen.
3 Main functionality

This chapter offers a brief overview of the main functionality of Blancco File Eraser. Read below if you want to find out how to use the application in a safe and efficient manner. This versatile application can be used on a single user machine as well as in a large corporate network with centralized control, licensing and installation.

3.1 Main menu

This is the main menu of the application and the user interface. There are other ways to interact with the application but this is where you will spend most of your time. The buttons on the left-hand side represent the different operations. Each one of the operations are described in the following sections.

You can change the erasure algorithm from the drop-down list at the bottom of the window.
3.2 Erase files and folders

On startup, the software shows the “Files and Folders” view. If you are not in that view, click on the “Files and Folders” button to access it.

In order to add files or folders for erasure, you can simply drag and drop them into the window. You can also add individual files by clicking on the “+” symbol, which will open up the file explorer for selecting the files.

Press the green “Erase” button to start erasing the selected files and folders.

![Example screenshot of File Eraser interface]

Note: If a shortcut is dragged and dropped to File Eraser, then the shortcut’s target is erased.

3.3 Erase the recycle bin

To erase the contents of the recycle bin, click on the “Recycle Bin” button on the left-hand side of the main window. After that, press the “Erase” button to start the erasure.

![Example screenshot of File Eraser interface]
3.4 Erase system files

Enter the “System Files” view and click on the “Erase” button to erase the temporary files and temporary Internet files. This operation will erase unused files in the selected temporary directories.

3.5 Erase free disk space

This operation is used for erasing all the available free hard disk space. It should be done regularly in order to maintain good data leak protection.

In the “Free Disk Space” view, select the hard disks on which you want to perform the operation. The amount of free space gives an indication of how long the process will take.

You also have to select if you want to erase all free disk space, erase old file and folder names in the file table and also the slack space of your drives. Erasing the slack will take a long time to complete but is
recommended for increased protection. For the best possible security, all operations should be checked and performed.

3.5.1 Erase all free (unused) disk space

This option will create a temporary folder on your selected drive and fill it with a number of large files until there is no more space left on the disk. The application will then continue to erase the files using the selected algorithm. Please note that Windows might warn you that you are running out of available disk space. It is safe to ignore this warning since the disk space will be made available once the erasing is done.

3.5.2 Extra thorough Erasing (includes slack)

A cluster is a small part of the hard disk – usually only a few kilobytes in size. Each file is distributed over a number of clusters depending on its size. Even if the actual data being stored requires less storage than the cluster size, an entire cluster is reserved for the file. The unused space in a cluster is called the slack space. It is sometimes useful to erase the slack space since there might be a lot of sensitive information stored there.
3.6 Erasure reports

When the operation has been finished, a summary window is displayed with the result of the operation. The color of the icon indicates the result of the operation:

- **Operation successful**: The operation was successfully completed.
- **Completed with exceptions**: The operation was partially successful. The program encountered some unexpected problems.
- **Operation failed**: The operation you tried to carry out encountered some problems.

If you want to inspect the erasure operation, you can click on the “View Log” button. This will open your default browser with detailed information about the erasure. The erasure reports (or log files) are automatically saved in the application directory. If you want to access your files, there is a shortcut available in the Settings dialog as well as in the Start Menu’s program directory.

Example of an erasure report.

There is also an option to have each report stored in XML format in the report folder. This is useful for storing them in the Blancco Management Console. Contact Blancco if you wish to enable this option.
3.7 Settings

Use the Settings menu to change different aspects of the user interface. The different options include:

*General* – Provides options for changing languages and other miscellaneous settings. It also helps you handle your log files.

*Erasure* – Provides the option to change the default erasure algorithm and also contains brief information about them.

*Updates* – Used for enabling and disabling automatic updates. Also lets you set the periodicity.

3.8 Update

Allows the user to check and download any available updates to the application. This can also be done automatically by using the Settings menu. The automatic downloads can be removed for deployment in larger organizations where updates are handled centrally.

3.9 Subscription

This is where you register your license if you have received a license code. This is necessary if you wish to continue using the application after your trial period has expired. Please contact us if your license has expired and we will gladly be of service.
4 Previous Versions

This chapter offers additional information about Previous Versions in Windows and the impact they may have on your privacy and data.

4.1 What are Previous Versions?

Windows includes a useful innovation to help you protect your data: Previous Versions. This feature automatically creates point-in-time copies of files as you work, so you can quickly and easily retrieve versions of a document you may have accidentally deleted. This feature is a potential security risk as sensitive files can be recreated – even if they have been deleted.

4.2 How to erase Previous Versions

When you erase files and folders or the recycle bin, a dialog will be displayed before they have been erased. This dialog asks you if you also wish to erase previous versions of the selected files. This is an operation that requires you to elevate your privileges using the User Account Control.
Enter your administrative account password and wait while the previous versions are being erased. You can verify that the files have been removed by right clicking on a drive in Windows and selecting "Restore previous versions".

**4.3 Disable dialog**

This dialog can be disabled by selecting the option "Always leave previous versions". This can also be modified in the Settings dialog.
5 Subscription and activation

This chapter offers an overview of how to activate your product subscription. If you have an organizational license you can skip this information.

5.1 What is the Subscription Center?

You will always need an active subscription in order to use the application. When you first install the application you will be able to run it for free during a "grace period". When this evaluation period expires you will need to purchase an activation code. This code is used to activate your subscription. Use the Subscription button in the main window in order to handle your subscription.

5.2 Purchase and activate your subscription

Open the Subscription Center to purchase or activate your personal activation code. Once you have received your activation code, simply enter it into the Subscription Center. The code will automatically be validated against our server and your subscription will begin.

Important: Activating or reactivating your subscription requires an Internet connection.

5.3 Re-activate an existing subscription

When your current subscription expires you will need to purchase an extended subscription. This can be done by using the Subscription Center. From here you will be able purchase additional time for your current subscription.

When you purchase additional time for your subscription, your current subscription will need to be re-activated with our server. Please use the Subscription Center to do this. You will not need to enter a new license code since your old one has been extended with additional time.
6 Activation troubleshooting

1. **The license is not accepted.**
   a. The license code must be entered exactly as it appears in the license info.
   b. Including upper and lowercase letters, periods, etc...

2. **The program seems to hang when the code is activated.**
   a. The program tries for five minutes and during this period there will be no progress.
   b. If it takes longer than 30 seconds it is most likely that a firewall or a similar program blocks access to our activation server.

3. **The activation went well, but at the next start-up, the program has forgotten the registration information.**
   a. There is possibly an anti-virus protection that blocks access to the program. Start the application as the administrator by right-clicking the program icon and selecting “Run as Administrator”. Then you can continue activating the program as usual.
7 Additional information

The Blancco File Eraser can also be used through sending parameters to the .exe or by using a special command line feature. These interfaces are optimized for efficient integration and atomization of file erasing operations. If your licensing includes these configurations, please see the Blancco File Eraser - Administrator’s Manual.
8 Contact information

Visit the technical knowledgebase (FAQ) and contact Blancco Technical Support by submitting a technical support ticket at:

http://support.blancco.com/

See the instructional videos for Blancco products at:


For contact information and the latest information about secure data erasure solutions, visit the Blancco website at:

http://www.blancco.com/

We are always looking for ways to improve our products. Please let us know if you have any suggestions!