



Blancco – File Shredder

User Manual



VERSION 7.6.5.0
Windows Vista, Windows XP and Windows 2000.
Certified for Windows Vista and Windows XP.

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TABLE OF CONTENTS

About Computer Security	2
Vulnerabilities and Updates.....	2
About File Shredding.....	2
Structure of the Hard Disk.....	2
How to Shred Data.....	3
Levels of Information.....	3
Real-life example.....	4
Install and Uninstall.....	5
Install using a CD:.....	5
Install using a file:.....	5
Uninstall the application:.....	5
User Guide.....	6
Main Menu.....	6
Shred Files and Folders.....	6
Shred the Recycle Bin.....	7
Shred System Files.....	7
Shred Free Space Wizard.....	8
Log files.....	9
Settings.....	9
Update.....	10
About.....	10
Previous Versions	11
What is Previous Versions.....	11
How to Shred Previous Versions.....	12
Disable dialog.....	12
Activation	13
What is the Subscription Center.....	13
Purchase and activate your subscription.....	13
Re-activate an existing subscription.....	13
Command line and Scheduling	15
Schedule tasks in Microsoft Windows.....	15
Available commands.....	17
Examples.....	19
Event logging.....	19
About Blancco Ltd.....	21
Contact and Support	21

ABOUT COMPUTER SECURITY

Computer security is the process of preventing and detecting unauthorized use of your computer. People use computers for everything from banking and investing to shopping and communicating with others through email or chat programs. Although you may not consider your communications to be very secret, you probably do not want strangers reading your email, using your computer to attack other systems, sending forged email from your computer, or examining personal information stored on your computer (such as financial statements).

Taxonomy of computer security:

<i>Confidentiality</i>	information should be available only to those who rightfully have access to it
<i>Integrity</i>	information should be modified only by those who are authorized to do so
<i>Availability</i>	information should be accessible to those who need it when they need it

Vulnerabilities and Updates

Unfortunately, intruders are always discovering new vulnerabilities (sometimes called "holes") to exploit computer software. The complexity of software makes it increasingly difficult to thoroughly test the security of computer systems. When holes are discovered, computer vendors will usually develop patches to address the problem(s). However, it is up to you, the user, to obtain and install the patches and to configure the software to operate more securely. It is common that applications provide an automatic update functionality to help you to secure your system. Make sure that you always have the latest version of the software you are using. This applies to your Windows operating system as well as any application that you frequently use.

TIP: Blanco- File Shredder comes with patch functionality. Use the update feature in the menu to download the latest version of our software.

ABOUT FILE SHREDDING

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 one thought to have 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 shred hard drive information by intentionally overwriting that data with other data so that the original data cannot be recovered.

Structure of the Hard Disk

The 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.

How to Shred 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 algorithms. The simplest algorithms only go one pass, while some of the most advanced overwrite the data up to 35 times (i.e. Peter Gutmann's algorithm). The byte patterns that are used by the algorithms are both random and determined, which ensures an even higher level of security.

Blanco – File Shredder supports the following algorithms:

- HMG Infosec Standard 5, The Baseline Standard (1 pass)
- HMG Infosec Standard 5, The Enhanced Standard (3 passes)
- Peter Gutmann's algorithm (35 passes)
- U.S.Department of Defense Sanitizing (DOD 5220.22-M) (3 passes)
- Bruce Schneier's algorithm (7 passes)
- Navy Staff Office Publication for RLL (3 passes)
- The National Computer Security Center (4 passes)
- Air Force System Security Instruction 5020 (4 passes)
- US Army AR380-19 (3 passes)
- German Standard VSITR (7 passes)
- OPNAVINST 5239.1A (3 passes)
- National Security Agency (3 passes)
- U.S.Department of Defense Sanitizing (DoD 5220.22-M ECE) (7 passes)

Levels of Information

There are a number of 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 they exist.

"Free Space" - Includes information in slack space, backing store for virtual memory, and old data that has been partially overwritten.

TIP: Make sure that you run the "Shred Free Space Wizard" regularly in order to secure your information.

Real-life example

Two graduate students from Massachusetts Institute of Technology have exposed a treasure trove of personal and corporate information on used disk drives: They bought 158 disk drives for \$1,000 on the Web and at swap meets. Scavenging through the drives, they found more than 5,000 credit card numbers, medical reports, and detailed personal and corporate financial information. The information was either freely readable or could be read with data recovery software that is commercially available for about \$150.

Source: "Remembrance of Data Passed: A Study of Disk Sanitization Practices", Massachusetts Institute of Technology, IEEE 2003.

"Security is a chain; it's as strong as the weakest link. Mathematical cryptography /.../ is the strongest link in most security chains. The computer security, the network security, the people security - these are all much worse"

Bruce Schneier

INSTALL AND UNINSTALL

This chapter will help you to install Blanco – File Shredder.

Install using a CD:

Insert the Blanco – File Shredder CD into your optical drive (CD-ROM or DVD).
Choose “Install” from the menu.
Follow the instructions on the screen.
Enter your personal license information when prompted.
The application will start automatically as soon as the installation process has been completed.

Install using a file:

Double click on the installation file.
Follow the instructions on the screen.
Enter your personal license information when prompted.
The application will start automatically as soon as the installation process has been completed.

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

Uninstall the application:

Open the Control Panel.
Choose “Add/Remove Programs”.
Select the application you wish to remove.
Follow the instructions on the screen.

USER GUIDE

This chapter offers a brief overview of the main functionality of Blancco – File Shredder. 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 big corporate network with centralized control, licensing and installation.

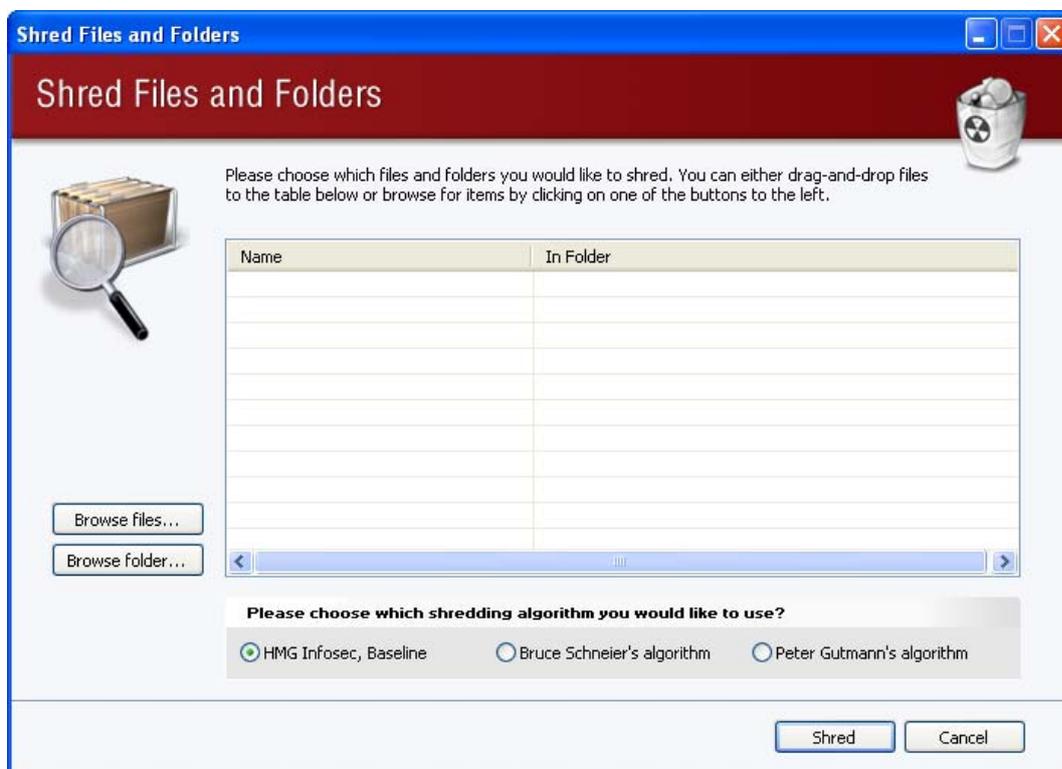
Main Menu

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 represent the different program functions. Each one is described in detail below.



Shred Files and Folders

Click on the “Files and Folders”- button to display the desired function window (see below). In order to shred individual files and folders, you can simply drag and drop them into the window and they will be automatically added or you can use the Browse-buttons on your left to add objects to the list.



The different algorithms available in the shortcut menus are listed in order of speed. Left is the fastest and right is the most secure. The middle alternative is the algorithm you have selected in the settings menu.

You can easily change the default shredding algorithms. Simply go to Settings in the main menu and select the shredding algorithm of your choice.

Shred the Recycle Bin

Simply click on the button to shred the content of your recycle bin. You will be prompted to confirm the operation.

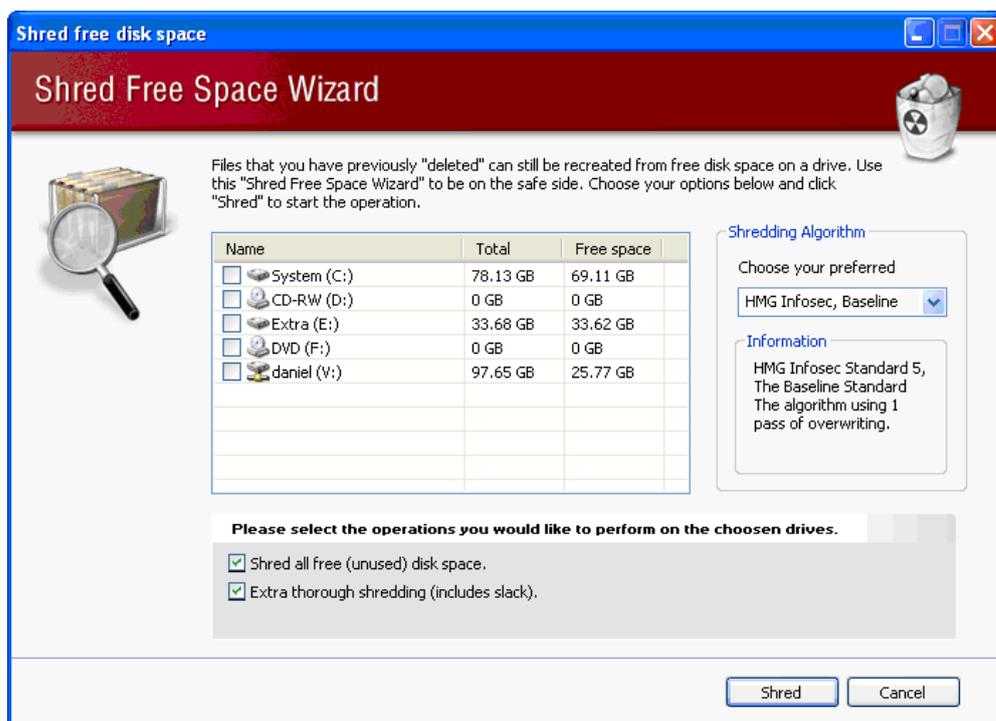
Shred System Files

Simply click on the button to shred your temporary files and your temporary Internet files. This operation will shred unused files in the selected temporary directories.

The location of the system files differs depending on the version of Windows you are using. For example: in an English version of Windows XP, the default directory for the temporary folders are "C:\Documents and Settings\

Shred Free Space Wizard

This guide is used for shredding all your available free hard disk space. This should be done regularly in order to maintain the confidentiality of your information.



Add the hard disks that you want by selecting them with the box to the left. The amount of free space gives an indication of how long the process will take.

The different shredding algorithms are available on your right. For increased security, select an algorithm that uses multiple overwriting passes. However, be careful as this will greatly increase the time of the operation.

You also have to select if you want to shred all free disk space and the slack space of your hard disks. Shredding the slack will take a long time to complete but is recommended if you want increased protection.

“Shred 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 shred 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 shredding is done.

“Extra thorough shredding (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 shred the slack space since there might be a lot of sensitive information stored there.

Log files

When the operation has finished, a summary window will be displayed with the result of the operation. The color of the smiling face indicates the result of your operation. Please read the text for a description of the summary.



Operation Successful

Operation log completed with errors

Operation Failed

If you want to inspect your operation you can click on the “View Log File”-button. This will open your default browser with detailed information about your shredding. The 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 and in the Start Menu’s program directory.

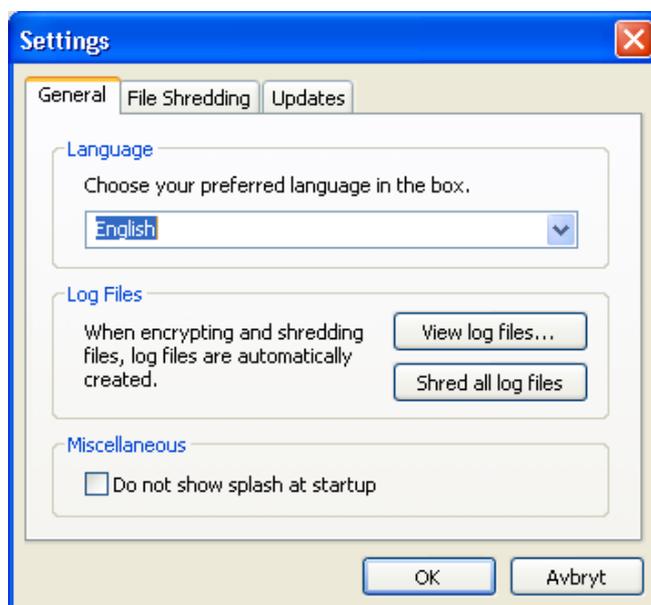
Settings

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. Also helps you to handle your log files.

File Shredding – Provides the option to change the default shredding algorithm and also contains brief information about them.

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



Update

Allows the user to check and download any available updates to the application. This can also be done automatically using the Settings menu.

About

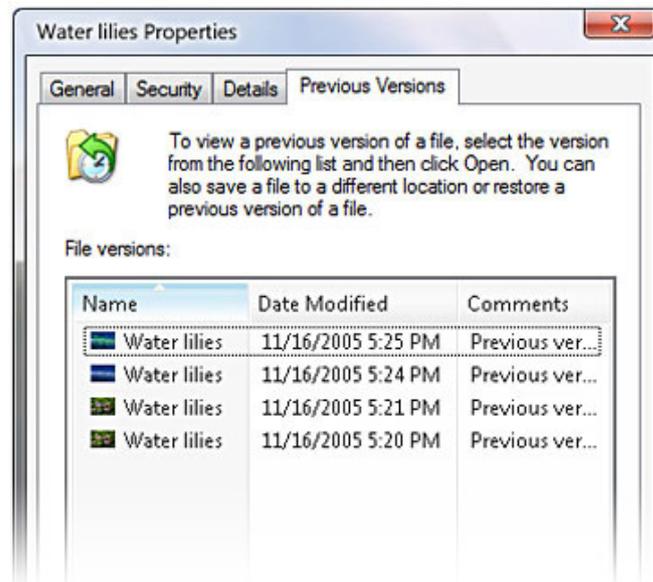
Used for registering the application. This is necessary if you want to continue using the application after your trial period has expired. Please contact us if your license has expired and we will help you.

PREVIOUS VERSIONS

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

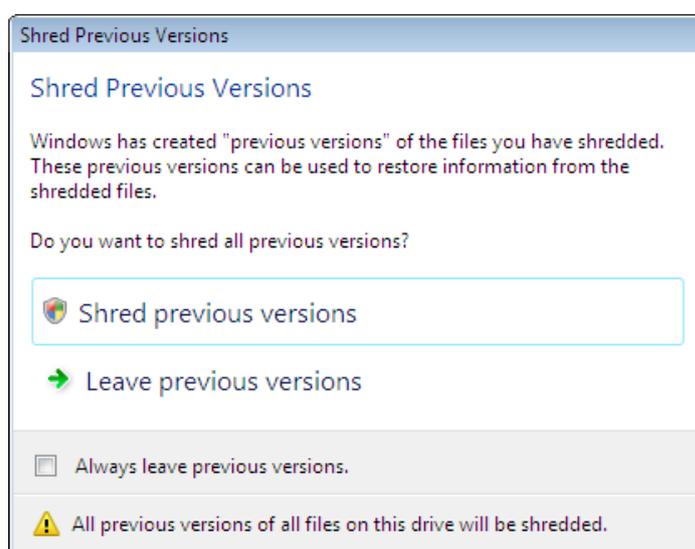
What is Previous Versions

Windows Vista 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 shredded.



How to Shred Previous Versions

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



Disable dialog

This dialog can be disabled by selecting the option “Always leave previous versions”. This can also be modified in the Settings dialog.

ACTIVATION

This chapter offers an overview of how to activate your product subscription.

What is the Subscription Center

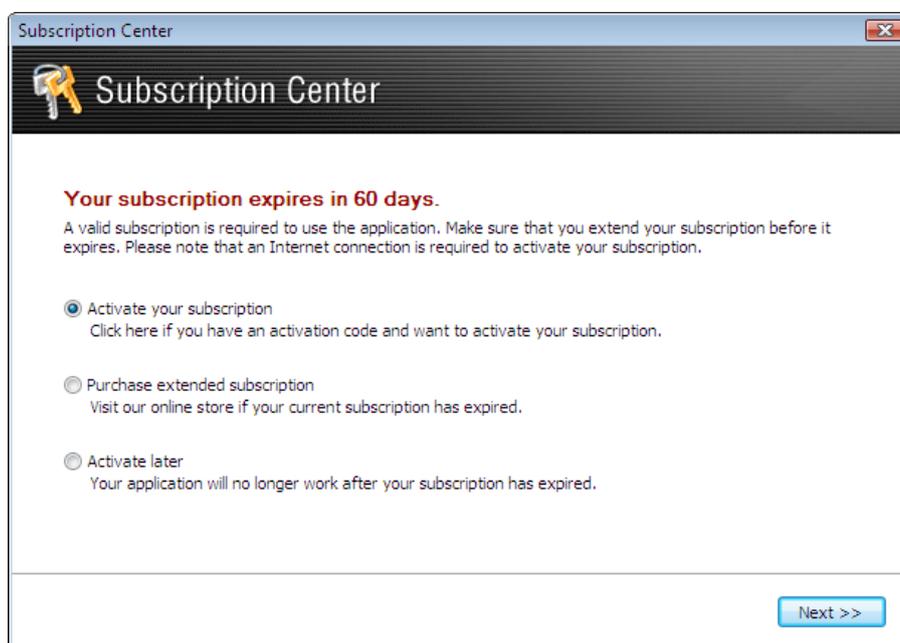
You will always need an active subscription in order to use the application. When you first install the application will be able to run the application for free during a “grace period”. When this evaluation period expires you will need to purchase an activation code. This code is used to activate your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

Purchase and activate your subscription

Open the Subscription Center to purchase or activate your personal activation code.

When you have received your activation code simply enter it in the Subscription Center and enter your personal activation code. The code will automatically be validated against our server and your subscription will begin.

Important: Activating your subscription requires an Internet connection.



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 to your current subscription.

When you purchase additional time to your subscription your current subscription will need to be re-activated against 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 the additional time.

Important: Re-activating your subscription requires an Internet connection.

COMMAND LINE AND SCHEDULING

The efficient command line feature in the Blanco – File Shredder allows for many different implementations of Shredding in a network or on a single machine.

This chapter offers an example on how to schedule shreddings in Blanco – File Shredder. Please contact sales for more examples of possible implementations.

Schedule tasks in Microsoft Windows

You can add a scheduled task in Microsoft Windows by opening the “Control Panel” and select “Schedule Tasks”. Open “Add Scheduled Task”. A guide will open.

When you are requested to select an application. Select Blanco – File Shredder in the program list. You can also browse to the correct application that is located in “C:\Program files\Blanco\Blanco – File Shredder\SITFileShredding.exe” (on English Windows XP).

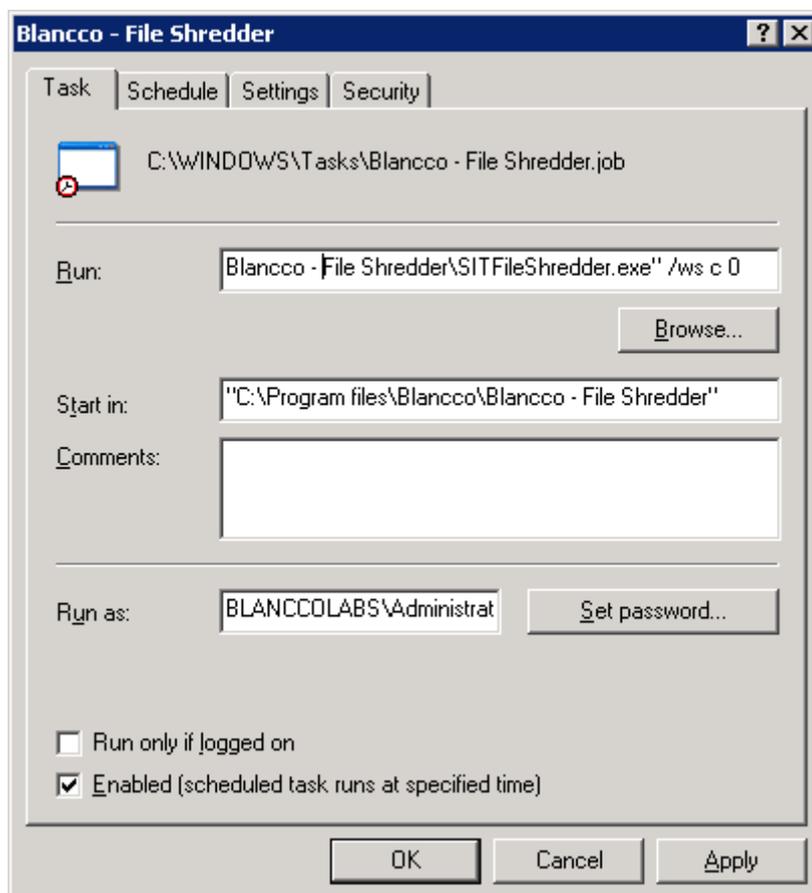


Continue through the guide and select time, date and frequency of the operation you wish to perform. You can also select the user that should run the operation.

Before you finish the guide, make sure that you have selected “Open advanced properties when I click Finish”. See the picture below.



The advanced properties window will open when you are finished. Go to the textfield "Run:" and enter the appropriate command after the quotation mark. This is an example of how the text in the "Run:" field could look like:



"C:\Program files\Blancco\Blancco - File Shredder\SITFileShredding.exe" /ws c 0

The available commands are listed below.

Available commands

Use the following parameters to achieve the desired operation. The parameters should be passed on to the operation according to the example above. Some operations requires you to enter a algorithm – the list of available numerical representations are listed in the last table. Parameters listed in brackets “[]” are optional and not required for the operation.

Silent Shred Temporary Internet Files (without the GUI).	
Command	/stifs algorithm [stfs]
Flags	
algorithm	Specifies the algorithm to run. The value must be from 0-10. See below.
Stfs	[optional] Run Shred Temporary Files after completing the Shred Temporary Internet Files operation.

Silent Shred Temporary Files (without the GUI).	
Command	/sfs algorithm [stifs]
Flags	
Algorithm	Specifies the algorithm to run. The value must be from 0-10. See below.
Stifs	[optional] Run Shred Temporary Internet Files after completing the Shred Temporary Files operation.

Silent Shred Recycle Bin (without the GUI). Log is created.	
Command	/rs

Silent Shred Free Disk Space (without the GUI).	
Command	/ws drive algorithm [wfs]
Flags	
Drive	Defines one or more drives to run the operation on. I.e. "iok" should perform the operation on drive I: then O: and last K:.
algorithm	Specifies the algorithm to run. The value must be from 0-10. See below.
Wfs	[optional] Run Shred File Slack operation with the same parameters after completion of Shred Free Disk space.

Silent Shred File Slack (without the GUI).	
Command	/wfs drive drive algorithm [ws]
Flags	
Drive	Defines one or more drives to run the operation on. I.e. "iok" should perform the operation on drive I: then O: and last K:.
Algorithm	Specifies the algorithm to run. The value must be from 0-10. See below.
Ws	[optional] Run Shred Free Disk Space operation with the same parameters after completion of Shred File Slack.

Silent Shred files or folders (without the GUI).	
Command	/ss algorithm file [file...]
Flags	
Algorithm	Specifies the algorithm to run. The value must be from 0-12. See below.
File	Specifiec the file or folder to shred. Folders are shredded recursively. More files can be specified, seperated by space. The whole path should be specified, ie c:\temp.txt

Silent Shred File Slack (without the GUI).	
Command	/wfs drive drive algorithm [ws]
Flags	
Drive	Defines one or more drives to run the operation on. I.e. "iok" should perform the operation on drive I: then O: and last K:.
Algorithm	Specifies the algorithm to run. The value must be from 0-10. See below.
Ws	[optional] Run Shred Free Disk Space operation with the same parameters after completion of Shred File Slack.

Shredding Algorithms (as used above)	
0	HMG Infosec, Baseline
1	HMG Infosec, Enhanced
2	Peter Guttman's Algorithm
3	U.S Departement of Defence
4	Bruce Schneier's Algorithm
5	Navy Staff Office Publ.
6	NCS Center
7	Air Force System Security
8	US Army
9	German Standard VSITR
10	OPNAVINST 5239.1A
11	NSA 130-1
12	DoD 5220.22-M ECE

Examples

This operation will shred free disk space on C:\ with the HMG Infosec, Baseline algorithm:

```
SITFileShredding.exe /ws c 0
```

This operation will shred the recycle bin with the default algorithm:

```
SITFileShredding.exe /rs
```

This operation will shred temporary system files and Internet files with OPNAVINST:

```
SITFileShredding.exe /stifs 10 stfs
```

Note: When you choose the location of the file or files that should be shredded you can also use “wild-cards”. I.e. if you write C:\temp*. * all files in the temp folder will be selected for shredding.

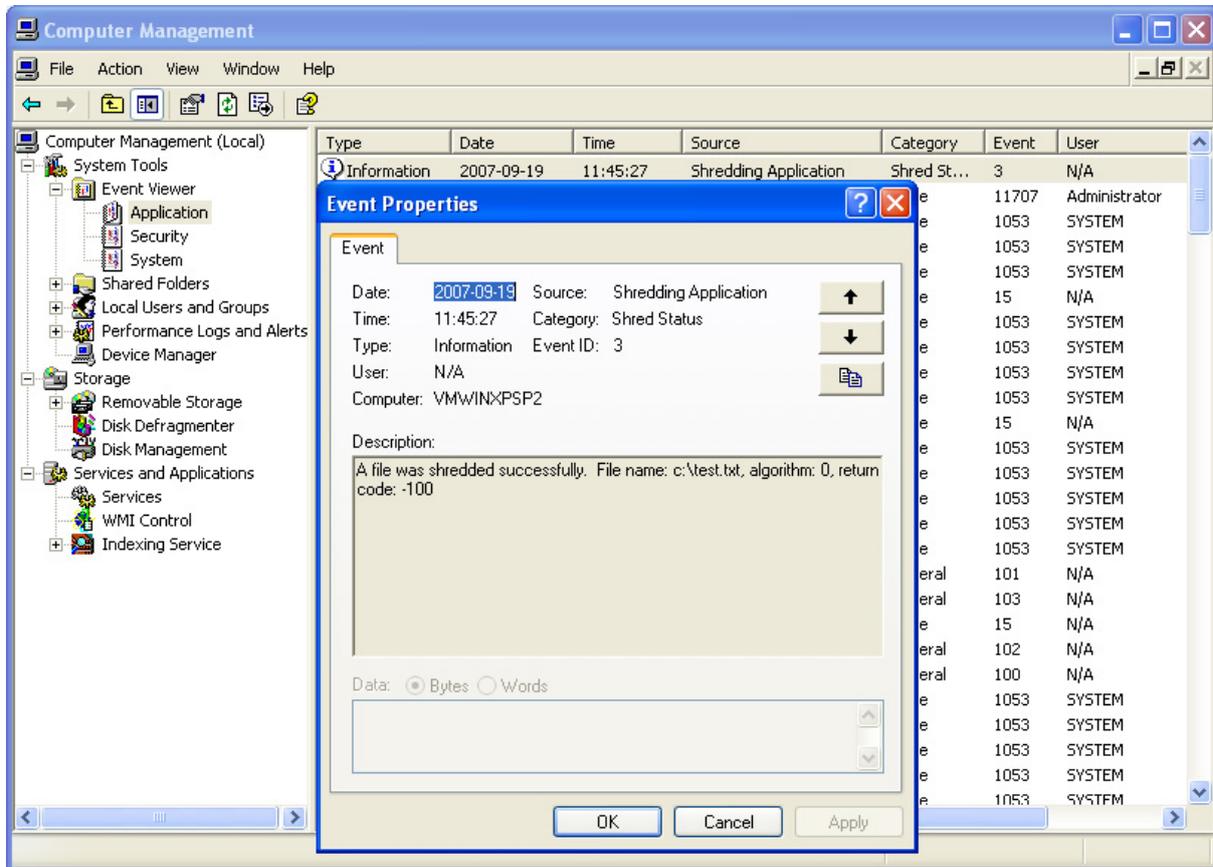
EVENT LOGGING

There is a log module built in to the application that can be easily activated or requested as a default feature. The standard module uses the windows event log.

Windows Event Viewer

The result of the event logging can be viewed in the Windows Event Viewer. The information contains the following information:

- If the job was successful (otherwise a warning will be shown)
- File that was shredded
- Time when shredding was completed
- Shredding algorithm used
- Computer name where the job was performed.



ABOUT BLANCCO LTD.

With several million end-users, an impressive clientele and a broad network of trusted partners, Blanco has proved to be the global specialist in the field of professional data destruction and computer reuse management. Blanco has achieved many [security awards](#) worldwide.

Founded in 1997, Blanco Ltd. has its corporate headquarters in Joensuu, Finland. Besides its 7 international offices, Blanco has partners in all continents and in more than 20 countries.

CONTACT AND SUPPORT

If you have any questions regarding our products and services, please feel free to contact us.

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Please visit our homepage (<http://www.blancco.com>) for more information on our products and our local offices around the world.

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