# How to Securely Delete Files from Your Computer Hard Drive

It's common knowledge that when you right-click on a file you're given the option to 'delete' it. This sends the file to the Recycle Bin, which can then be emptied, and the file seems to vanish. The only problem is that files 'deleted' in this way don't truly disappear from your hard drive. Instead, these files remain on your computer and can be retrieved with easily accessible file recovery software. This problem exists due to data remanence.

This guide offers a two-step secure solution to address this data remanence problem:

Step 1: Wiping files - Wiping deleted files from your hard drive for permanent removal

Step2: Wiping free space and data remanence - Wipe the free space and data remanence

Here is a step-by-step instruction on how to implement this solution.

#### **Step 1: Select Your Files for Wiping**

Begin by installing BCWipe, unless you have already done so, you can get started with your free trial today. Once you have installed the software, you can quickly wipe files from your hard drive without opening the full BCWipe program by simply using the handy right-click feature.

• Right-click on the file you want to wipe and select 'Delete with wiping'



• Select 'Yes' to run BCWipe with administrator privileges

Run BCWipe with administrator privileges?
Running BCWipe with administrator privileges allows for better in-depth wiping with increased reliability.
Show this message next time

Note: BCWipe will erase your selected files beyond recovery, so double check that you have selected the correct files!

#### **Step 2: Review Wiping Settings**

BCWipe comes with default wiping settings.

 Click 'Yes' to wipe with default settings, or select 'More >>' to edit settings



By selecting 'More >>' you can:

Set wiping schemes and other wiping options in the 'Wiping options' tab



• Enable logging by checking 'Use file log' in the 'Process Options' tab

Wipe targ	et File C:\Users\ will be wiped an Continue this o	\Documents\B d then deleted! peration?	CWipe 7\Delete with	n wipin\Perso	nal data.doc
	Cancel	Skip	Yes	Yes to All	Less <<
	Wiping option	Process Options			
		Use log file	ain\Documents\1.L0	DG	
		LogView	Notepad	Clear c	ontent
		LogView O Truncate previous Append to previou	Notepad content s content	Clear c	ontent

# Step 3: Wipe Your Files

Now there's nothing left to do but wipe your files! Click on 'Yes' to start the wiping process. Your selected files are now being wiped.

Wipe target	File C:\Users\ will be wiped an Continue this o	\Documents\BC nd then deleted! pperation?	Nipe 7\Delete with	wipin\Personal	data.docx
	Cancel	Skip	Yes	Yes to All	Less <<
	Wiping option	s Process Options			
		Use log file	n\Documents\1.LO	G	
		LogView	Notepad	Clear cont	tent
		Truncate previous of  Append to previous Maximum appended	ontent content size (in kB):	1024	

Before you start wiping the free space and data remanence that your files left behind, it might be helpful to understand that wiping free space refers to the process of overwriting everything on the drive that doesn't contain an active file. This includes cells that were completely empty.

#### Step 4: Enable 'Wipe Free Space'

Begin by installing BCWipe, unless you have previously done so. Not ready to buy yet? No problem, you can get started with your free trial now. A quicker way of wiping the free space and data remanence that your 'deleted' files have left behind is to use BCWipe's right-click feature.

• In Windows Explorers, right-click on the drive you want to wipe and select 'Wipe free space with BCWipe



• Click 'Yes' to run BCWipe with administrator privileges



## **Step 5: Review Additional Settings**

At this stage, you can review and set additional options and settings. If your Recycle Bin isn't currently empty, click on the 'Empty' button

🌏 Wiping	g drive 'C:\'
9	Recycle Bin is not empty. Click 'Empty' to clean it (recommended).
	Empty Continue Cancel

• Under the 'Scheme' drop-down menu, select the wiping schemes you want to use

Wipe driv	e free space			?	$\times$
General	Wiping options	Process Options			
	Local Disk (C:)	Lo	ocal Disk le system: NTFS	i	
Total space	:	471,5 GB	50	6252722176 B	_
Free space	:	126,9 GB	13	6288948224 B	
Wiped and	Reserved:	Not assigned!	Manage R	leserved Part	
[10111]	Scheme: U.S	S. DoD 5220.22-M(	E)	~	
<b>&gt;</b>	Passes: U.S	S. DoD 5220.22-M( S. DoD 5220.22-M( map BCL//STTR	ECE) E)		
	Estimated wi Ru Bri Bri Bri NA Help NA Ca US On	E M 205. 1-2 (U.S. 1 ter Gutmann ice Schneier ssian GOST R 5073 tish HMG IS5 (Basel tish HMG IS5 (Enha VSO P-5239-26 (MF VSO P-5239-26 (RL nadian RCMP TSSIT Army AR380-19 e random pass	Department of E 9-95 ine) nced) FM) L) I OPS-II	nergy)	

• Additional wiping options can be selected from the 'Wiping Options' tab

General	Wiping options Process Options		
	Unused space in Swap File	Encrypt Swap File	
	MFT Records ( 145934/748800 )	View Dirty Records	
	☐ File slacks ( duster 4 KB ) ✓ Directory slacks		
	Use skipped list	Edit/View skipped list	
	Estimated wiping time: 5 Hours		2
	Help OK	Cancel Abo	ut

• To enable logging, check 'Use file log' in the 'Process Options' tab

General	Wiping option: Proce	ess Options				
	What do you want to do when the process finishes?					
	Close the window	~ 🗌 R	emember my ch	noice		
	Use log file					
	LogView	Notepad	Clear c	ontent		
	O Truncate previous o	content				
	Append to previous	content				
	Maximum appended	d size (in kB):	1024		× V	

# Step 6: Manage Reserved Space

This is an optional step that reduces the amount of time that wiping free space and data remanence takes. By using the 'Manage Reserved Space'

feature, BCWipe will block off a part of your computer's free space after it has been wiped, which reduces the amount of free space that needs to be wiped in the future.

- Select the 'Manage Reserved Part' option in the 'General' tab
- Drag the slider to define a threshold
- Click on 'OK' when ready

Local Disk (C:) - NTFS         Total disk space:       471,5 GB         Common unused space:       126,9 GB         Current free space:       126,9 GB         100%         Enter the minimum amount of free space remaining after wiping (threshold). The rest of the free space will be reserved and reduced automatically if the current free space becomes lower than the threshold.         Minimal free space:       76,2 GB	Reserved s	pace manager		?	×
Total disk space:       471,5 GB         Common unused space:       126,9 GB         Current free space:       126,9 GB         100%       100%         Enter the minimum amount of free space remaining after wiping (threshold). The rest of the free space will be reserved and reduced automatically if the current free space becomes lower than the threshold.         Minimal free space:       76,2 GB		Local Disk (C:) - NTFS			
Common unused space:       126,9 GB         Current free space:       126,9 GB         Inter the minimum amount of free space remaining after wiping (threshold). The rest of the free space will be reserved and reduced automatically if the current free space becomes lower than the threshold.         Minimal free space:       76,2 GB		Total disk space:		471,5	GB
Current free space:       126,9 GB         100%         Enter the minimum amount of free space remaining after wiping (threshold). The rest of the free space will be reserved and reduced automatically if the current free space becomes lower than the threshold.         Minimal free space:       76,2 GB	-	Common unused space:		126,9	GB
100%         Enter the minimum amount of free space remaining after wiping (threshold). The rest of the free space will be reserved and reduced automatically if the current free space becomes lower than the threshold.         Minimal free space:       76,2 GB		Current free space:		126,9	GB
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		Enter the minimum amount of free space remaini (threshold). The rest of the free space will be re automatically if the current free space becomes	ing after wiping served and red lower than the	uced thresho	old.
	(	Enter the minimum amount of free space remaini (threshold). The rest of the free space will be re automatically if the current free space becomes Minimal free space:	ing after wiping served and red lower than the	uced thresho 76,2	old. GB
Reserved 50,8 GB 60%	(	Enter the minimum amount of free space remaini (threshold). The rest of the free space will be re automatically if the current free space becomes Minimal free space:	ing after wiping served and red lower than the erved 50,8 GB	uced thresho 76,2	GB

#### **Step 7: Delete Windows Restore Points**

If Windows Restore Points are detected, you will be prompted to delete them. In this case, it is recommended to select 'Yes'.



## **Step 8: Wipe Free Space and Data Remanence**

The process of wiping the drive's free space and data remanence will now start. You will see this screen after the wiping task has finished.

Wipe fre	e space on dri	ive D:\		5 <del></del>		×
Scheme: 'l	J.S. DoD 5220.2	2-M(E)', passes	3, verification On.			
	System Swa	ap File				
JOK.	File Slacks					
	Directory Sl	ack	- Wiped passes 3	3/3 (verified	)	
	MFT Records		- Wiped passes 3	3/3		
	Free Space		- Wiped passes 3	3/3 (verified	)	
Total proc	cess time 32 Mins					
When v	vining finishes:	Keen the win	dow active	Remember n	ny choice	
1110117	nyan ng tin na noas	incep one wan	Show I	og file	Clos	se .

Congratulations, you now know how to securely wipe deleted files from your computer hard drive. Happy Wiping!