



## Crash Proof - Data Loss Prevention

### Crash Proof - Data Loss Prevention Software

Crash Proof is data loss prevention software which once installed recovers 100% data in the event of a data loss situation.

**Concept:** Most post-crash data recovery software has serious technical limitations in getting back 100% of the data. Only a partial recovery was possible in most cases. Moreover a non-technical end user was unable to handle the issues like connecting a disk or media on which to transfer the recoverable files. Post crash recovery software sometimes also requires input about how data was lost or how it happened, and this is not what a non-technical user would know, wants to investigate, or would be willing to admit (How many users admit they did restart the PC without properly shutting it down? Who would ever open an attachment that was possibly infected with a virus?).

Another part of user psychology is that user only will search for data recovery software when user faces a problem and everyone around user are on their toes, like user's staff, IT department, service provider and of course accounts department to shell out a lot of money for data recovery service or purchasing a post crash data recovery software. Moreover neither services or data recovery software guarantees 100% recovery.

#### The Problem:

- Partition / Boot sector corruption
- Directory structure / File run corruption
- File Allocation / Master File Table errors
- Viruses
- Accidental disk format
- Accidental file deletion
- Bad file transfer
- Faulty software
- Incorrect operation of certain disk management utilities
- Voltage glitches

Solution: Crash Proof - Data Loss Prevention Software.

## Scope of Work:

1. Revives the disk if the partition/boot Sector is corrupt. You get messages like "Invalid drive specification", "Invalid Media Type Error", "Missing Operating System".
2. Revives the disk if FDISK is accidentally run.
3. Revives the disk to original working state even if a drive is accidentally formatted.
4. Revives the disk/drive/partition if it goes missing.
5. Revives the disk if root folder is corrupted.
6. Revives the disk if there is a FAT error/mismatch.
7. Recovers deleted files.
8. Recovers data files if operating system is not booting up.
9. Recovers data files that are lost because of folder corruption.
10. Recovers deleted files with original names. First character intact.

## Features:

1. A new concept in data loss prevention (it is disk based revival and not backup-restore).
2. Guaranteed Recovery. Unistal assures 100% recovery if pre-installed.
3. Only software to recover fragmented files after accidental formatting or deletion.
4. Only software to bring back a formatted partition as it was before the crash.
5. Only software that brings back deleted files with their original name.
6. View and save the contents of drive as they were on any day of the week.
7. No technical expertise required as the recovery process is automated.
8. No need to take our hard disk to connect elsewhere.
9. Time required to revive is immediate and hence computer down time is reduced.

## Achievements:

1. CrashProof has achieved a landmark of being installed on more than 5,00,000 packages since its launch on September 1999.
2. It has been successfully tested at PC Quest Labs, HCL labs, Wipro Test Center, Digit Labs, CRN Labs, and empanelled by [National Informatics Center \(NIC\)](#), [DGS&D](#) and [NCCF](#).

How it Works: Crash Proof.

Pre-Crash: Crash Proof when installed stores the system area and file system index information as images in the disk. These parameters have information about the partitions, boot values, allocation unit and folder structures. Crash Proof updates the parameters on a daily basis at the time of the first system boot and every interval (2 hours, 4 hours, 8 hours) as specified by the user. This needs to be done since, file allocations keep changing and adding up as and when files are added in the system.

The Crash: Data is stored on the disk; it is linked to the operating system using the indexes like Directory Structures, the File Allocation Tables or Master File tables, Data runs, Boot Record and Partition Sector. When these areas get corrupted, data/files are assumed lost. The operating system is unable to locate and present it, because the file links are lost. Any slight difference in values or bytes in any of the system areas will render data or OS inaccessible! Common hard disk crash messages are, "Invalid Drive Specification", "Invalid Media Type Error", "Drive not found"; "ROM basic error", "Missing DLL", "Operating system not found". At that moment, data/files are still physically present on the disk!

Crash Proof Revival: In the event of a disk crash, Crash Proof rebuilds the file system parameters, and indexes from its stored images to their original locations. This way Crash Proof revives 100% data, even if you're PC is not able to start up due to OS corruption. The complete revive process takes only a few minutes.

## Frequently Asked Questions: Crash Proof

### How does Crash Proof Work?

Crash Proof once installed takes the critical system information and stores it in different points on the disk. This critical info contains the partition information, boot information, directory and file structures. So later if the data is lost or disk is crashed, Crash Proof bypasses the operating system and searches the critical info stored in various points of the disk. It then calculates and rebuilds the damaged area to bring it to its previous state.

### What if the critical information stored by Crash Proof itself gets corrupted?

This is not possible because there are many copies of this information stored which are scattered in many areas of the disk in a protected form. Even if any image file is deleted forcefully, it gets recreated automatically when the system clock reaches that day.

### Why should I install Crash Proof?

I have not yet faced data loss problems?

You might not have faced them, but data loss does not forewarn. Moreover, susceptibility to data loss is more these days since virus occurrence is high, Internet/e-mail usage and data transfers are increasing. Moreover data dependency and data volumes, criticality, complicated images make data safety all the more necessary. Can you ever think of rewriting all the data stored in there since many years?

Crash Proof is not a PC essential.

Crash Proof should be installed before the disk crashes

- since; Prevention is better than recovery

- The time of revival is reduced

- Down time of the system is

- reduced Recovery is guaranteed

### If my operating system is not booting up, I can reinstall it. What is Crash Proof's role in such a case?

Yes, to bring your system to a working condition you may re-install the operating system, but you are risking loosing your valuable data. There have been many instances when users have lost all their folders after reinstalling the operating system! The recovery CD that is a part of many laptop PC's these days is not a data recovery CD ( a misconception to the users ) but an operating system installer CD, which formats the disk and then installs the operating system afresh. So why risk loosing your data, let Crash Proof be the first line of defense. Because Crash Proof is data centric.

### How much disk space does CP occupy?

Crash Proof occupies about 2% of disk space after taking all the images.

Will CP interfere with other programs running in the system? No, since it does not occupy RAM.

How much time does it take to install? About 2 Minutes.

### What do I have to do daily?

Nothing, as CP executes automatically once a day, or as per schedule and updates the images automatically.

### How much time does it take while booting?

CP executes only for the first booting on a particular date. It takes less than 30 seconds. But that does not hinder the performance or work stoppage. You may continue working normally and CP will work in the background.

What is the minimum PC configuration required for installation?

CP has been successfully tested on Intel486 and above systems with HDD capacities of 630MB and 32MB RAM.

When will CP fail to recover? What are its limitations?

The limitations are 1) If hard disk is not being detected by the setup, 2) If data is overwritten after it is lost or overwritten due to a virus corruption, 3) If disk is encrypted.

What if I defragment my disk? Will CP work after that also?

Yes, after you defragment, all the file allocations change. So on the next run of Crash Proof, it will automatically update its image. Alternatively, you may choose the manual image updating process to update the image immediately.

I keep backups regularly, Why do I need Crash Proof then?

Backups depend on a lot of human intervention. Moreover backups will not work in cases of logical crashes like, file deletions, virus corruption's. For instance, there is virus which converts all office files sizes to 0 bytes. The file is present but it is showing 0 bytes. In such a condition, backup software would simply backup the file along with 0 bytes! Moreover with Crash Proof you would get back data in the same and latest form, this would be done immediately so no down time.

So if I install Crash Proof can I do away with backups?

Crash Proof is not an alternative to backups. It is in fact complimenting backups in a way that, backups will not be used often but need be used only in case of physical damage of the computer or hard disk. More over if Crash Proof is installed, backup tapes etc need not be stored in the same premises, they can be stored in another location.

If I install Crash Proof on my server, then are my nodes protected?

No, Crash Proof is hard disk based revival, so it needs to be installed on all computers having hard disk. To protect the server you need to install Crash Proof server software, and for nodes Crash Proof for Desktops have to be installed.

Limitations of CrashProof :

CrashProof cannot recover data from physically bad hard disks. Those hard disks which are not detected by the setup, or have a clicking sound in them indicating that the head assembly is gone, logic card is faulty etc.

CrashProof cannot recover data from compressed/encrypted hard disks. Those hard disks which have been compressed using stacker or double space etc.

In case the files of a package are internally corrupted. For e.g. a file is not saved properly, or the system is switched off when a process is going on, or if the file is copied on/to bad sectors etc.

Complete recovery of deleted files is not guaranteed when new files are copied on the disk after the delete/format/ operation.

Loading of the operating system is not guaranteed after the crash has occurred, but the data files will be intact.

## **System Requirements**

- **File System Supported:** - FAT32, VFAT, NTFS and NTFS5
- Windows 8, Windows 7, Vista, XP, Windows 10, Windows Server 2008, 2003 and 2000
- 800 MHZ Processor or higher

## **RAM**

- 512 MB (Windows XP & Windows Server 2003/2000)
- 1 GB (Windows 8, Windows 7, Windows Server 2008 & Vista, Windows 10)
- 500 MB available Hard Disk space