

Data Recovery - Types

Data Recovery is an Art & Science of extraction of data from inaccessible digital storage media. Data recovery can be subdivided in following major types –

1) Logical Recovery –

Due to various reasons like a) viruses b) Electrical disturbance C) OS Corruption d) human errors like accidental format etc , drives logical parameters (partition table / file system) may get corrupted. Using advanced proprietary technology we can recover almost 100 % data.

2) Electronic Recovery –

Drives on board electronics may get burnt or damaged due to electrical spikes / overheating etc. In depth knowledge of disk drive & inventory of spares is necessary for this work as part of drives firmware is also needs to be manipulated.

3) Firmware Corruption –

Firmware is a special types of codes / programs used by drives manufacturer for initialization and normal working of disk drives. Following are reasons for firmware corruption – a)Manufacturing bugs / defects b) Overheating c) Electrical spikes
A sophisticated technology & skillsets are required to access this part of drive as it is well protected by manufacturer & is inaccessible to user.

4)Mechanical Failure –

Disk drives are extremely delicate & precision electro-mechanical devices , there operation is subject to various electrical , environmental parameters.

Following are reasons of mechanical failure –

- a) Wear & tear of precision mechanical components due to ageing
- b) Working Life of hard disk was long over (a hard disk ever manufacture has to die one day)
- c) Using drive beyond its rated uses profile (consumer disk used in Business environment . Refer Enterprise disk details in Download)
- d) Mechanical stress (accidental fall of laptop , shocks / vibrations etc)
- e) Electrical spikes /surges
- f) Defects /Bugs in firmware
- g) Overheating

This type of recoveries are most complex as serious clean room work is Needed ,Diagnostics charges with cost of spares is applicable.(Irrespective of outcome)

Success in case of Physical recoveries Cannot Be guaranteed as it depends upon Platter Degradation /

Servo alignment etc. Scratches on platter may instantly kill new heads.

5) Encrypted / Password Recovery -

Cyber criminals & hackers taking control of PC remotely may lock entire data. Viruses / Spyware like Crypto locker (Refer. www.cryptorecovery.net) which injects a strong RSA 2048 bit private encryption key in all data files.

With the help of International forensic experts & various law enforcement agencies We have developed unique technology solution to decrypt data.

6) Overwritten Data Recovery

If Accidentally disk is formatted & new OS reinstalled , It will overwrite all metadata (previous file system components). We have developed our own forensic Data Recovery technique in case of overwritten cases . We can recover partial data in such cases . Pls. refer overwritten case studies in Download section.

"In Truer Sense this cannot be called a Full Blown Data recovery , rather we are extracting whatever is leftover by Overwriting process."

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