**How to avoid data loss on MAC OS devices**

MAC is the digital shadow of our life. We store our pictures, videos, vacation clicks on it to make us feel nostalgic about our moments. Also, sensitive documents, work-related files are residing on our personal mac device. Imagine if we lose these memories of our life due to some data crash or any other reason it would be cumbersome to replace them and time-consuming process even with the data recovery solutions. This is where preventive measures come into the picture. In this article, I would like to explain a few ways which we can adhere to avoid the data loss in the first place and save us the long walk down the data recovery road.

**Consistent Backup**

There’s no substitute for consistent and organized backup of your data. This is the most efficient way to prevent data loss. A lot of people still lose data due to a lack of diligence while backing up the data. The data should not be backed up in the different partitions of the same disk. It is always advisable to store your data at an offsite location or a different disk. Also, one should take care of personally verifying that the backup data is not corrupt before erasing it from MAC.

**Stable Power Supply**

Fluctuating power voltage can cause us real distress with the data loss. A sudden surge in power or even frequent outage of power supply can erase our data and unsaved work. If we are using desktop OS it is good to have Uninterruptible Power Supply (UPS) which can provide us with the time window to save our work and perform normal shut down.

Even if there is no data loss during a power outage, it can have a serious impact on our hardware and disk life. A controlled power supply and smooth backup can help us with business continuity.

**Proper ejection of external devices**

A lot of us are guilty of doing this and have to bear the repercussions of the same. Properly ejecting the USB drive, or any other external media before disconnecting them directly is really important. A failure to do so can not only lead to data loss but also permanently render that section of drive corrupt and inaccessible. As an additional caution, we should also scan the USB drives or any other external storage before transferring data on them.

**Environmental conditions and Human Errors**

This is a pretty obvious thing that we should keep our MAC devices in controlled temperature and protect it from outside heat, rains or humidity. This can damage the hardware parts of our device.

A naïve way of avoiding data loss is making sure we do not spill over our coffee or water as it can cause permanent damage to the drive. If we are programming something we need to make sure it is properly saved and bad script with logical bugs is not getting executed. Programming errors on our part can lead to a hard restart. Closing down running applications and saving unsaved work can help us avoid data loss. We must ensure that if some data is moving between our device and external storage it should not be moved from one place to another as it can disrupt the USB drive connection. Abruptly transferred data can not only crash but damage the disk partition.

**Robust Antivirus Software**

Viruses, malware, DDOS attacks are still a menace to users all over the globe. It would be unwise not to invest in reliable and secured antivirus software to protect our disk from all sorts of attacks. This also helps in the daily scan of our device and cleans up the junk.

A good antivirus software provides us with detailed reports of memory clean up jobs and the malware blocking. Timely updates of the latest antivirus software patch are must as it acts as a firewall to our device system.

**Avoid MAC OS X updates on malfunctioning MAC**

There is a general perception that by installing a new update of our MAC OS existing problems will cease to exist. One thing to remember here is by installing new updates without resolving previous issues or doing root cause analysis of old bugs the new update will not work as intended. This will result in OS crashing.

Unless we are aware of the installation process it is good to read FAQs or the official manual guide before doing any task which might affect the system if done wrongly. One should also ensure that there is enough battery backup while updates are in progress.

**Third-Party Applications**

Just like the Trojan horse was an outside enemy, the installation of third-party apps without checking their compatibility can have a significant impact on the hard drive and result in data loss. Mostly these applications are either in beta mode or are not completely bug-free. They can cause existing software applications to stop working. A lot of factors need to be checked like compatibility, source, and system files before we install other applications.

**Disk Maintenance**

A very effective process of disk defragmentation after every few months can be helpful to avoid the disk crash. It helps in storing the data in a more concise manner and also fills in the empty blocks which might have been created due to incomplete running of some backend process. This also arranges the data contiguously which reduces the overhead while accessing it. Cleaning up old files that are no longer in use can also help to free up the memory and decrease the latency of working.

**Power-off device when not in use**

Turning off the power is a good practice to follow in order to avoid excessive heating up of the device. If the power is constantly turned on it might hamper the disk and lead to data loss. The cooling down period is equally important when the device is not operational.

Also, we can make sure the device internal fan is working properly to regulate the heat in and heat out from the device. It helps to regulate the temperature inside the MAC system when the disk is performing frequent write operations.

**Choice of File System**

This might seem like something very trivial in the larger scheme of things but is often very crucial detail which is missed by most of us. We generally use FAT32 file system over NTFS due to its familiarity and simplicity. If given a choice an NTFS file system should be adopted as it comes with better protection, a greater degree of security control and flexibility to have longer filenames.

All this coupled with good system registry of NTFS makes it a better option to avoid data corruption and also have a better chance at recovery in case the worse happens.

**Bad Sectors**

Bad sectors on the hard disk can result due to a lot of factors like overheating, malware attack, knocking, and error in the file system. All these things can make a particular part of memory corrupt and leaving the data on it inaccessible. Also, initially, it is not easy to spot the bad sectors as it may not lead to instant data loss. A verified backup and recovery solution can help us to avoid the data loss resulting from the bad sector.

**Do not try to invent the WHEEL again!**

Last but not least is to avoid the urge of trying every new software or command tricks on our MAC device. There are many YouTube channels that suggest things to improve the efficiency and overall performance of the system. Unless we are totally sure of what we are doing we should avoid any tweak in our system. Avoiding running commands which can affect the root system is also necessary.

**Conclusion**

There are many data recovery solutions available now in the market in the event of data loss but it is prudent to avoid it in the first place. Many times we can avoid these problems by following good practices and staying informed from official sources. A little diligence on our part can help us avoid the hassle of data loss and its recovery.