

YOUR DATA PROTECTION STRATEGY FOR SUCCESS: 3-2-1-1-0

As you prepare your organisation to prevent cyberattacks, it's also critical to think through how to recover if the worst-case scenario happens.

Long-term data-backup guidance consistently offered a 3-2-1 strategy – that is, three copies of your data on two different media with one copy stored offsite – but that is evolving. The gold standard is now **3-2-1-1-0**, and here's why that strategy is so important.


Gartner predicts that at least **75%** of IT organisations will face one or more ransomware attacks by 2025.

> [Source](#)



3

Different Copies of Your Data



2

Different Media Types for Storage




1

Copy That Is Kept Offsite



1

Copy That Is Kept Offline



0

No-Errors Backup

A 3-2-1-1-0 backup strategy reduces the impact of a single point of failure. As ransomware attacks continue to rise, plan ahead to make sure your data protection strategy has you covered.

WHY 3 COPIES?

The three copies of your data include your primary data plus two backup copies.

In addition to any rapidly restorable failover copy, there should also be true backups.

WHY VARIOUS MEDIA?

The three copies should be kept on at least two different types of storage media. With so many applications, data, and storage solutions moving to the cloud, it's important to diversify storage between cloud and on-premises storage solutions.

WHY OFFSITE?

How your cloud backups are stored is often tied to your cloud provider's data protection strategy. It's best to ensure a copy of that data is virtually isolated from the production network. When preparing for natural disasters, you want to make sure at least one backup copy is physically removed from the main site and transferred to a different zone in case a hurricane, tornado, or other natural disaster strikes.

WHY OFFLINE?

When a backup is physically isolated, ransomware can't get to it. Your air-gapped backup copy is separated from the network where your primary copy is stored. If the primary copy or onsite backup is corrupted or compromised, the offline backup can be used for a restore. This is often a tape backup.

The software air gaps common in object storage go a long way, but nothing beats a physical air gap when you are trying to protect data.

WHY NO-ERRORS?

Copy 0 is a no-error backup, that is immutable and cannot be altered in any way. It is typically held offline, and can be used to recover from a ransomware attack.

To ensure zero errors are maintained, data monitoring should be done daily and errors corrected as soon as they're identified.

39% of SMB organisations don't have an incident response plan for responding to cyberattacks and data breaches.

> [Source](#)

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