



Secure Your Company's Data by Utilizing the **3-2-1 Backup Strategy**

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In today's environment, data backup has evolved beyond simple redundancy in the server room — backup is a process, and the best way to ensure a successful backup plan is with the 3-2-1 rule. Simply put, a complete backup plan requires **3** copies of your data, spread across **2** different kinds of media, with at least **1** of the copies sent off-site.



It's important to understand that data loss is not so much a matter of 'if' but rather a matter of 'when.'

Old hard disks that spin can only spin so long, and drive heads can fail. Spinning discs are also highly susceptible to dust, magnetism, and heat.

Newer solid-state drives have fewer points of failure but have a finite amount of read and write times — and when these drives fail, it is not as simple as taking a hard disk to a clean room and swapping platters. Chip failure inside an SSD can often mean irreversible data loss without the hope of even partial recovery.

The only true way to ensure data is backed up is to ensure its redundancy. The 3-2-1 rule is an easy way to check if you're good to go in the event of disaster. Even if your file server backs up to a secondary server, and even if those servers have various redundant arrays of drives, there's still more work to be done to ensure your data is protected.

Hardware failure is the reason for data loss in organizations in 35% of the cases¹.

Cautionary Tales

Getting data off-site and even offline is critical for worst case scenario situations. Consider a ransomware attack – should it proliferate to your file server, and your backup server is on the same network, it's possible the ransomware would encrypt even your backup server. This makes the backup essentially useless. A single site for data is a single point of failure.

Similarly, destructive acts of nature could bring flooding and power issues to an entire region of states, which means an off-site backup should be geographically distant from your main center of operations. Cloud-based backups check that box quickly and easily.

“Without off-site backups, your data protection solution is only half-baked. CloudCare makes 3-2-1 as easy as 1-2-3.”



Backups Secure More Than Your Data

Implementing a quality backup system for your data center or mission-critical servers is more than just a smart move for your company internally. A proper backup solution can improve your risk assessment and help streamline your overall infrastructure. This can open the doors to purchasing cybersecurity insurance and improve your score on compliance audits. Beyond this, your backup solution can even be used as a value-add for external clients and customers, giving them peace of mind and confidence in your company.

What does 3-2-1 look like?

Here's a few examples on what a complete 3-2-1 solution looks like.

SuperCo's file server does a nightly backup to the on-site backup server. Each week, SuperCo's IT team review the backups, and uploads them to a long-term cloud storage solution. As an extra layer of protection, each month a complete backup is performed to tape storage, boxed up, and then shipped to a secure off-site location for safe keeping.

In this example, we have in-house redundancy (1), backed-up by a cloud-based solution (2, offsite), enhanced with another off-site backup, using a second source of media (3).

Here's another example — MicroPop's file server in NYC syncs continually with Amazon EC2 for parity in the cloud, and that redundancy is then mirrored back down to a network-isolated secondary file server located in Colorado. In Colorado, a tech performs a bi-weekly copy of the file server to an external drive and files it away in another off-site secure location.

You can see this situation is quite similar, and in both cases, there's redundancy that is easily accessible, a cloud backup that protects off-site and finally, alternative media that is in play should the worst happen.

Depending on what kind of infrastructure you have will depend on the data path, backup methods and media storage solutions you may need.

Aren't using 3-2-1? CloudCare can fix that.

Not sure where to start? Intelligent CloudCare has the experience you need to make 3-2-1 a reality. With our expertise and consultation services, we can look under your hood, scan your entire existing infrastructure, and craft a backup plan that hits the mark for the 3-2-1 and is tailored to your needs.

Our team of experts have multiple decades of combined knowledge and have overseen the deployment and utilization of various backup platforms and state-of-the-art technologies, from Box, Amazon, Azure, Veeam and beyond.

Whether you're an SMB looking to take the next step, or just a handful of seats at a startup, data backup should be at the heart of your IT solution playbook.

We're not just here to take you to the cloud, we're here to provide you **intelligent cloud care**.



Contact us today to have your infrastructure and security posture assessed by the CloudCare Team at no cost to you.

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