GUIDE · BACKUP STRATEGY

3-2-1-1-0: the backup rule built for ransomware.

The classic 3-2-1 rule kept data safe from hardware failure and disaster. Ransomware goes after backups too, so the rule grew two more numbers: one copy an attacker can't change, and zero untested restores.

3

copies of your data

Production plus at least two backups, so one failure never leaves you with nothing.

2

different storage types

Disk and cloud, or disk and tape, so one media failure or one vendor flaw can't take every copy.

1

copy offsite

In a different location, far enough away that one storm, fire or outage can't reach both.

1

copy immutable or air-gapped

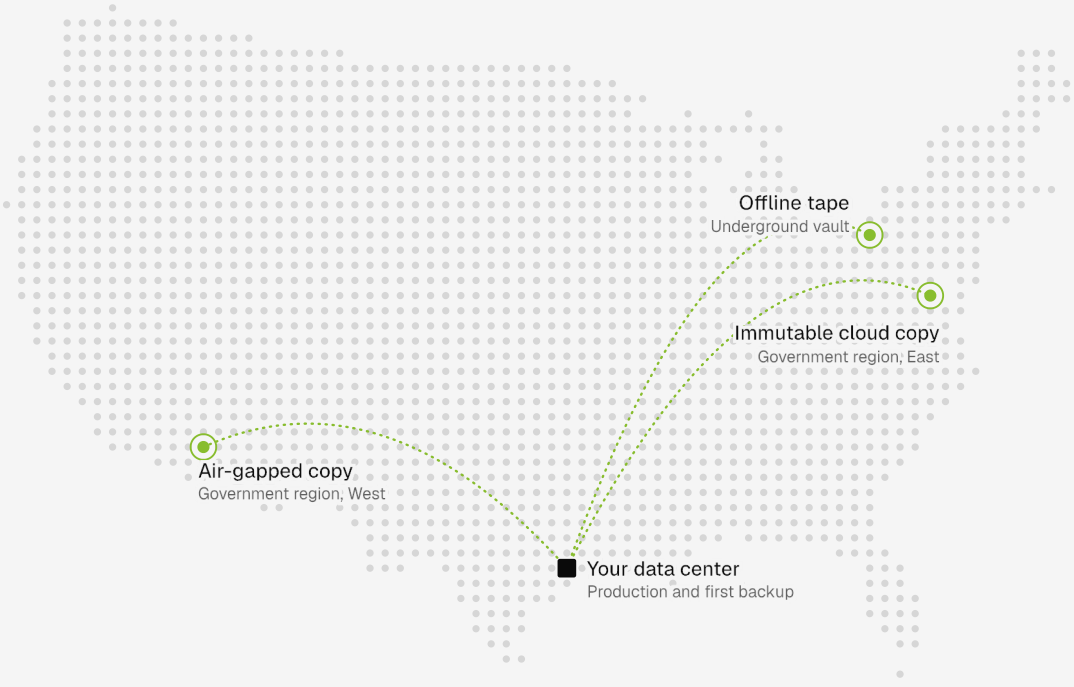
A copy that can't be changed or deleted, or can't be reached from the network at all.

0

errors

Backups verified and restores tested, so you know they work before you need them.

COPIES KEPT FAR APART · EXAMPLE LAYOUT



WEB
kelyntech.com · datastor.io

EMAIL
sales@kelyntech.com

PHONE
1-888-937-1230

TWO WAYS TO KEEP A COPY SAFE

Immutable, air-gapped, or both.

Immutable

The copy can't be altered or deleted until its retention period ends, even by an administrator. Ransomware can reach it, but can't encrypt or erase it.

Air-gapped

The copy is isolated from your network, logically or physically, as with tape on a shelf. An attacker who owns your environment still can't reach it.

WHY THE ZERO MATTERS

A backup you haven't restored is a guess.

Backups fail quietly: a job that skipped a server, a copy that won't mount, a restore that takes days instead of hours. The zero means checking every backup completes without errors, and regularly restoring from it, so the first real test isn't during an incident.

HOW KELYN COVERS EACH PART

One managed service, every number in the rule.

THE RULE	WITH KELYN
3 copies, 2 storage types	Datastor keeps Commvault backups in AWS cloud storage alongside your on-premises copy; Spectra Logic tape adds a third medium.
1 copy offsite	Datastor copies live in AWS, far from your data center.
1 copy immutable or air-gapped	Datastor Assured Recovery (DAR) keeps secure air-gapped and tamper-proof immutable copies behind multi-layered zero-trust access controls. Data on tape sits physically offline, isolated from every network.
0 errors	Recovery Co-Pilot (RECO) tests restores with your team and reports on their quality and speed. Cleanroom Recovery proves recovery in an isolated environment.

CHECK YOURSELF

Does your backup follow the rule?

Each “no” is the next thing to fix.

01	We keep at least three copies of our critical data.	☐ YES ☐ NO
02	Those copies are on at least two different types of storage.	☐ YES ☐ NO
03	At least one copy is offsite, far from our primary site.	☐ YES ☐ NO
04	At least one copy is immutable or air-gapped, out of an attacker's reach.	☐ YES ☐ NO
05	We've tested a full restore in the last quarter, and know how long it takes.	☐ YES ☐ NO

NEXT STEP

Score your full recovery readiness at kelyntech.com/cyber-readiness-scorecard, or talk to a KELYN engineer about closing the gaps: sales@kelyntech.com · 1-888-937-1230.