





CHAIN OF CUSTODY


Chain of custody (CoC), refers to the act, manner, handling, supervision and/or control of media or information. The ultimate goal of successful chain of custody is to preserve the integrity of the data (files, video etc.) while providing a detailed audit log of who has touched it, when and where. CloudLanes is the leading provider of digitally archived media in the cloud with Chain of Custody and enables implementation of several best practices:


 **Tracking:** Data that is sent to the cloud is tracked by a unique “bar code” that is a unique identifier for it. This “bar code” always “travels” with the data until its destruction and thus can be always tracked.

 **Security/Encryption:** AES 256 encryption is applied to the data before it leaves on-premises towards the cloud vault.

 **WORM protection & Retention Lock:** User specified settings allow when the data gets “WORMed” after which modifications to the data are no longer possible. A user may then specify a retention lock, which prevents data erasure (accidental or malicious) to the protected data.

 **Cloud Control:** User specified settings further allow a customer to specify when the data goes the cloud. The chosen set of data is “exported” when such an action is performed. It is also possible to have data that never goes to the cloud at the discretion of the customer. This gives the customer complete control over what data should and should not go to the cloud.

 **Data Verification:** Cloud storage offers a high degree of resiliency once the data gets to it. However, a variety of situations can cause data corruption or data loss during transmission, re-transmission, or at rest. While most clouds offer a high degree of resiliency, data at rest can still be subjected to silent errors due to bit rot and other factors. This is because storage system capacities have increased considerably, but the error rates are relatively unchanged. Customers are also transferring larger amounts of data faster, thus arriving at corruption thresholds quicker. Conditions such as firewall or infrastructure mis-configuration, TCP/IP escapes, etc. have also caused additional data errors. It is best to verify the data at least on a periodic basis to ensure its validity. Furthermore, the cloud back door breaches — wherein malicious or unintended access happens to the cloud storage account, resulting in the data (though encrypted) being either changed or destroyed — is an increasing and urgent concern for all cloud data. CDP’s verification service can warn you of such back door breaches so you can take concrete action.

 **Movement of Data - On Prem to Cloud and Vice Versa:** When data moves its location from On-Prem to cloud or from cloud to cloud, CDP tracks and maintains a log of this move. Details on when the action was performed and by what resource is also captured.

 **End of Life & Shredding:** The cloud assets can be destroyed irreversibly when the retention period expires.

FEATURES & CAPABILITIES

- Audit Trail: Detailed audit logs of tape hand offs
- WORM: Write once, read many times with Immutability lock
- Retention Period: Specify retention period as days, months or years for guaranteed immutable retention of data
- In-Cloud Data Verification: Ensure data verification at scale on cloud
- Secure Erase: Ensuring all copies of data in cloud are erased
- Double vault locks: Prevent accidental deletes of vaults

SOLUTION COMPONENTS



CLOUD ARCHIVING VS REMOTE VAULTING (IRON MOUNTAIN)

Archiving in the cloud using CDP offers the following advantages:

ATTRIBUTE	REMOTE FACILITY VAULTING	CLOUD VAULTING	ADVANTAGE
Security <ul style="list-style-type: none"> • Media • En-route • Location 	<ul style="list-style-type: none"> • Encryption • Secure vehicles • Warehouse security 	<ul style="list-style-type: none"> • Encryption • In-flight security • At-rests security 	Cloud offers an end-to-end security with minimal human intervention. Less prone to human errors.
Audit Logs	Time stamps for when documents, tapes etc leave premise, arrive at remote vaulting location and when handled. Manually created and maintained.	Time stamps for when data vaulting to cloud began, was completed, and when data was touched in the cloud.	Detailed audit logs are available for cloud based vaulting on demand or preset schedule.
Verification	Manual and labor intensive	Verification of data at scale in the cloud <ul style="list-style-type: none"> • On-demand • Scheduled 	With physical media only a subset of media can be manually recalled and verified. Cloud offers the agility and the elasticity to verify all media on demand or a pre-set schedule
Reporting	Manual tracking of media, data	Detailed logs	Detailed reporting
Shredding	Manual destruction of media. Labor intensive.	Digital destruction	Media can be shred in the cloud at scale without manual intervention.
WORM	Each media must be checked for "WORM" protection	Media can be auto configured for WORM protection at scale	
Advanced Analytics	None possible	Ability to provide operational insights	Compute capabilities in the cloud can be leveraged to provide operational capabilities