

Solution Showcase

CloudLanes: Consolidated Cloud Archives with Responsible Data Management

Date: February 2017 **Author:** Mark Peters, Practice Director & Senior Analyst

Abstract: The new CloudLanes' Cloud Data Platform provides for the central management of an organization's archival—or tertiary—data, across multiple on-premises and cloud platforms, with reduced risk and increased reward. *Risk* is reduced by a “chain of custody” quality of data-assurance, while *reward* is enhanced both by the ease of “lighting up” archived data by leveraging best-of-breed cloud services, and by the freedom such security gives to optimize costs by migrating across [cloud] platforms.

Overview

You cannot move these days for talk about the proliferation and importance of data and—almost in the same breath—of data security. Such talk will inevitably include debates about the optimal use of the public cloud and, in turn, discussion of malicious system attacks and physical security. All of this is indeed important but there's another aspect to the judicious management of data, especially data that is likely to move between on-premises and the public cloud, and then—just as likely—between public clouds. *It is ensuring the integrity and audit-level quality of the data itself.* However well data is protected from malicious physical attacks or system hacks, it is a far more pervasive issue to ensure that the data that any organization actually uses is correct, and/or that who or what has used and changed any data is known in granular detail. Such changes could very well be permitted, and any changes could just as well be simple internal mistakes or perhaps inadvertent versioning errors more than intentional damage. However, tracking such things—providing and proving a “chain of custody”¹ or an “audit trail” for data—is becoming ever-more crucial in a hybrid IT world where data has become both dynamic and free flowing between applications, systems, and—increasingly—clouds. This is what a new company, CloudLanes, is seeking to address. While it has a much broader vision (which is due to be realized during the next year), the first version of its product, the Cloud Data Platform, is rolling out now, aimed squarely at enabling and checking accurate and easily active cloud archiving in the modern IT environment. In other words, providing built-in [meta]data security that does not require data to be either static or unused to achieve a faultless chain of custody quality of both “data-knowledge” and “data-quality-assurance.”

The Need for a New Approach

There has always been a need to securely and economically store and access large amounts of archival data. For the first few decades of IT, this pretty much equated to tapes, and then automated tape libraries, either stored in a basement or

¹ Note: According to Burton's Legal Thesaurus, “chain of custody” refers to the “complete administration, custodianship, guardianship, preservation, preservation from harm, preservation from injury, proper accounting, proper administration, proper archiving, proper care, proper cataloguing, proper documentation, proper recording, proper records and management, proper registration, protection, safe case and control, safeguard, safekeeping, stewardship, trusteeship.”

(more for backup than archive) replicated remotely. Yet today there are added pressures on this need: it's not so much the burgeoning volumes (that's nothing new, although the sheer scale of modern requirements for video, compliance, images, health care records, and so on certainly multiplies the issue) as the increasing use of the public cloud, and increasing access to, and movement of, data. Whether it is related to mobile applications or workloads that migrate from one public cloud to another, the ability to truly and sufficiently monitor and know what has happened to all of an organization's data is strained to breaking point. Moreover, it's a breaking point that can all too easily lead to significant negative business outcomes, whether those are in the form of mistakes, sub-optimized processes, or malicious incidents. Moreover, there's not much value in simply knowing that there's something awry; what is needed is full insight into what was changed, when, how, and by whom or what.

This is what the CloudLanes' Data Platform is all about. While it is a streamlined management solution that allows straightforward access to archival/tertiary data, its standout "secret sauce" is that it is an integral part of data security in the broadest sense, and one that is all too often missing in archive situations. Whereas most data security essentially looks *externally* from the data (at physical security, system security, or backups), CloudLanes essentially looks *internally* at the data itself. There's still enormous value in mass storage systems, and both tape libraries and the public cloud can be very economically attractive, but, without a management tool like CloudLanes, retaining a chain of custody quality control over an organization's tertiary data is a bit like trying to watch over an entire school of grade-schoolers in a crowded park or museum all by yourself. That said, current methods don't only suffer from a lack of "data-certainty." Continually striving for the best cost requires a level of flexibility across locations, devices, and clouds that is often not possible, and archived data—which, after all is simply less active but still primary data—invariably has to be restored and/or rehydrated in order to actually be used.

"The" contemporary IT demand is cybersecurity, above all else. This should apply to data, the cloud, and archives as much as anything. While CloudLanes' capabilities comprise more than its data-assurance to protect from, and alert to, both accidental and malicious data changes, its contribution to overall cybersecurity is going to be a key value to many users: After all, as ESG's latest version of its annual *IT Spending Intentions Research Survey* shows, cybersecurity is the IT priority chosen by the largest percentage of respondents again in 2017.²

CloudLanes Data Platform

Against this background of specific needs and general market drivers, CloudLanes' solution can be thought of simply as a de-risked cloud archive/tertiary data platform, one that does not require a user to change her overall current archive approaches but that adds "data-certainty" both now *and* dynamically as physical platforms change. Furthermore, it allows all the archived data that it manages to be "lit up" easily—that is, accessed and used without complex and time-consuming restore and rehydration efforts.³ This makes it an ideal consolidated archive, or media repository, etc. A good specific example is that of video rendering directly from the cloud using a cloud service such as Azure Media Service.

Some expanded highlights:

- The solution is cloud-native yet still maps within, and plugs into, existing tools and workflows, so as to give a consistent, catalogued archival policy across all systems, media, and locations, without any need to migrate.
- The solution is both cloud- and application-agnostic. Active Directory integration essentially enables sharing across clouds as desired, by allowing seamless authentication for multiple users with a single sign-on.

² Source: ESG Research Report, *2017 IT Spending Intentions Survey*, to be published, and prior annual releases of the same report. All ESG research references and charts in this Solution Showcase have been taken from this Research Report.

³ The product detail here is a high-level summary, as this paper is not designed to replicate or replace [CloudLanes'](#) own materials.

- It serves up required data without ingestion or rehydration, yet retains policy oversight, lifecycle management (for retention and disposition, etc.), full audit trails, and encryption.
- The metadata-based cataloguing, and access to it, is completely separate from the actual stored data. While the protocols, Tape, VTL, NFS, and CIFS determine the imported information that’s available to catalogue, CloudLanes itself is protocol-independent.

A Larger Vision

While the initial CloudLanes Data Platform is focused on cloud-based archived data, CloudLanes has a vision to add its “data-certainty blanket” to all data types, everywhere. Each release that it has planned for the next year or so while building out that vision can stand alone but will also be a part of the eventual whole. As networking performance (both speed and bandwidth) continues to improve, CloudLanes would become an increasingly applicable value-add for more applications and data types—an overall data management tool.

Market Applicability and Relevance

Rather than having to construct clever semantics to support CloudLanes’ proposition, the need for, and relevance of, its solution can easily be gauged from a selection of recent ESG research findings: Perhaps most significant is the date in Figure 1, which shows the initiatives that organizations expect will drive their IT investments in 2017.

Figure 1. Top Five Business Initiatives That Will Drive Technology Spending



Source: Enterprise Strategy Group, 2017

More than one-third of organizations identify increasing cybersecurity as one of their top five spending drivers (making it the most commonly selected overall). Moreover, when the cybersecurity responses are combined with those citing regulatory compliance assurance, more than half of respondents cited at least one of those among their top five technology spending drivers. Furthermore (also see Figure 1) there are numerous other requirements that CloudLanes can help to address, such as BI/data analytics and cost reduction (all areas in which access to an active, data-secure, and easily-used archive can be valuable).

Other points from the ESG research add further weight to the value that a solution such as CloudLanes can deliver across a number of IT areas:

- Cybersecurity is currently not only the most-cited business initiative expected to drive IT spending, but also the most-cited overall IT priority.
- The cloud infrastructure use case most cited by research respondents is data backup and archive.
- The top two technologies where respondents expect the greatest increase in expenditure in 2017 versus 2016 are (1) cybersecurity and (2) business intelligence, analytics, and/or big data.

The bottom line is clear—CloudLanes is introducing a market-relevant offering into a marketplace that IT users not only care about, but in which they are also [increasingly] investing. From a demand-side market perspective, CloudLanes has it right, but what about the company itself, its product, and go-to-market approach? As with any startup, CloudLanes must prove itself in execution. The product seems well designed (and its scalable 1PB “units” make sense, size-wise), and the company not only has VC funding but also a strategic alliance with Microsoft (indeed its first POC was with Azure, but it must ensure that it sticks to its avowed cloud heterogeneity and agnosticism as it moves forward).

From a product perspective, some latency is of course still associated with cloud-based archives, but as we see faster, higher-bandwidth networking roll out, CloudLanes will be able to expand its use cases from archiving to the likes of file consolidation and even production systems. But it has plenty of market opportunity to aim at before that is even an issue. In the short term, its biggest challenge is likely to be one of awareness—many users don’t even realize the exposure they have and/or might eschew cloud archiving anyhow, not even realizing that an answer to their [often unacknowledged] need is at hand.

Rather than just seeing the cloud as a data dump, CloudLanes is viewing it as, and enabling it to become, an agile, cost-effective, data-secure, and non-disruptive data facility. The environment seems ripe for such capabilities.

The Bigger Truth

The cost, complexity, and risk associated with managing multiple silos of archived data stretched across on-premises implementations and clouds are certainly anchors on the progress of something for which there is an abundant and growing need—low-cost, easily accessible, usable, and “safe” data. Many organizations inevitably end up with some mix of solutions and consequently have no centralized archive view.

CloudLanes provides all three legs of a compelling cloud archiving management “stool”: single control, a chain of custody level of data-assurance, and the ability to view and use archived data as easily as from a local C drive. This means that archival approaches that are “TCO-attractive” but that have until now been considered too risky can now be exploited safely. Furthermore, data insights can be enjoyed from archived data without compromising compliance needs.

Currently, much of the deployment of “cloud” is being molded to traditional IT approaches. Instead, the CloudLanes Data Platform embraces the new possibilities that cloud offers by combining the best of virtualization, cloud, and chain of custody capabilities in a new cloud-based offering. Think of it as an advanced, de-risked, and cost-effective CDM in and for the cloud. It thus makes high volumes of cloud data dynamic, “internally secure,” and usable rather than essentially static.

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