

The logo for Active Archive, featuring the words "ACTIVE Archive" in white. "ACTIVE" is in a bold, sans-serif font, while "Archive" is in a lighter, italicized sans-serif font. The text is set against a blue banner with orange and yellow diagonal stripes.

ACTIVE Archive

SAVED BY THE DATA

Active Archive Leads the Way in a Mid-Pandemic World

Active archiving positions organizations
to save money, efficiently access data
wherever it resides and build strong security

May 2021

A BLAST FROM THE PAST

"The 2019 Active Archive Alliance survey of 122 respondents indicates that 46% are not prepared to either implement an archive strategy or modify their existing strategy within the next year. Given the growth in archival data and use cases that depend on archival data, the survey response reveals a huge, unaddressed and growing archive data challenge for end users."

— AAA, "Active Archive and the State of the Industry," July 2019.

This statement proved eerily prescient when COVID-19 struck with a vengeance in 2020.

In 2021, organizations are working to capitalize on active archiving's lower cost, AI-driven analytics, and cybersecurity to regain lost revenue and improve competitive advantage.

FOREWORD

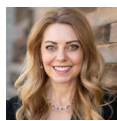
As the world heads into 2021 and the post-COVID-19 digital economy, IT leaders will focus on cost, data analytics and security. Intelligent active archive solutions based on AI will classify massive amounts of data and automatically move it according to user-defined policy from expensive storage tiers to economy tiers. Archived data stays highly accessible and secure.

Containing the costs of rapidly growing unstructured data is critical, leading to mandatory active archiving. Companies recognize the increasing value of data and the need to store ever-increasing volumes for longer periods of time cost-effectively.

AI-based analytics automate file placement across multiple tiers and storage types including flash, hard disk, tape, and the cloud. Data stays immediately accessible for file sharing and business/research analytics to support competitive advantage. Intelligent data tiering and automation have major roles in managing unstructured data at petabyte scale now and exabyte scale in the next five years.

Data security is another critical priority in an era of escalating cybercrime and swelling data repositories. With businesses relying heavily on data collection, usage, distribution, and monetization, securing that data is crucial to protecting business objectives.

Foreword by:



Betsy Doughty, Vice President of Corporate Marketing, Spectra Logic, Co-Chairperson, The Active Archive Alliance



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“The past decade has been a period of massive change for media workflows, and archives have taken a new role. Active archives are part of the daily workflow and play an essential role in creating new productions.”

— Ferhat Kaddour, VP Sales & Alliances, Atempo

MASSIVE CHALLENGES OF THE MID-PANDEMIC DATA WORLD

The pandemic massively impacted business in 2020. Customer behavior radically changed in pandemic conditions. And with swift shutdowns, companies that lacked remote worker support scrambled to provide it.

For prepared companies, the issues were an intensive burst of labor and technology purchases lasting a few weeks.

For others, attempting to transform and adapt to changed customer behavior and a new work culture within a few weeks was DEFCON 1: a company-killing surprise event.

Most of the companies who quickly responded already had digital data management like active archiving in place. When physical offices suddenly emptied, these businesses quickly accommodated remote workers. They also had access to data analytics and storage economies, which boosted competitive advantage and cost savings.

In 2021, surviving companies are still dealing with the vagaries of the pandemic. Vaccination schemes are moving forward in most countries. Shutdowns continue to occur in countries and states like California, where confirmed infections are still growing. And COVID variants are a global concern.

Yet, the world is making some progress against the pandemic, and public safety measures and vaccination programs go a long way towards protecting our populations and businesses.

But the world has also changed, and businesses must change with it.

Because even when the world crashed to a shutdown-driven standstill, data never stopped.

So, while 2020 was about businesses surviving massive changes in work culture and customer behavior, 2021 is about using data to thrive during permanent changes and market uncertainty.

Active Archiving for a Changing Business World

Unlike backup, which contains multiple copies of files, *basic archiving* creates a master copy of a file and stores it on a less expensive storage tier. In practice, copies still exist, but the archive saves space since it is not subject to backup.

Active archiving builds on this foundation by providing secure access, data protection, high availability, searchability, fast retrieval and virtually unlimited scalability for unstructured files.

Enterprise Strategy Group defines active archive as “a tiered storage topology/ solution that gives IT systems or human end-users access to data through a common, unified file system that automatically retrieves and places that data on the appropriate storage tier.” These storage tiers may be multi-vendor, on-premises and/ or the hybrid cloud and comprise different storage media types.

Software intelligence is the key to automatically storing accessible data in the most appropriate storage class according to its use and purpose. Metadata provides searchability and accessibility no matter where data is located, keeping data easily retrievable. Artificial intelligence (AI) and machine learning (ML) enable trending, access patterns, activity logging, automatic data movement and compliance analysis.

This is what active archiving is.

Let's move on to what active archiving does.

THREE SHUTDOWN RESPONSES

STRATEGIC ADOPTERS

Strategic Adopters recognized active archiving's cost savings and flexible data usage 5-6 years ago and invested early in adoption and expansion. When the pandemic hit, they were positioned to ride it out and pull ahead of competitors.

Status: Thriving

PLANNERS

Planners were sold on active archiving but had not deployed the technology before the shutdowns. They had already done the footwork, so they deployed active archives relatively soon. They lost time and money against competitors who already owned active archives but gained benefits shortly after deployment.

Status: Managing

LATE ADOPTERS

Late Adopters had no plans to budget for or deploy active archiving in 2020. Then COVID-19 happened. Many of these businesses scrambled to adopt active archiving to support changed conditions. Their investment helped them survive and prepared them to regain lost ground in 2021.

Status: Surviving

THE COST OF DATA GROWTH

"2021 will experience a significant change in active archive requirements, surging from hundreds of terabytes on average just five years ago to tens or even hundreds of petabytes in the very near future."

— Dave Thomson, Senior VP Sales & Marketing, QStar

"This insatiable growth is creating an explosion in long-term data retention and archive challenges. New storage technologies are emerging to support cost-effective active archives."

— Scott Hamilton, Senior Director of Data Center Platforms at Western Digital

"Traditional data centers will continue to expand active archives as the only method to meet budgets while improving operational efficiency on production systems."

—Shawn O. Brume Sc.D. IBM

"When it comes to an active archive, some people talk about on-prem, some people talk about cloud or even multi-cloud, and some people talk about hybrid, but what everyone needs is unified active archive platforms. The user doesn't care where the data is so long as it is quickly accessible when they want it and where they want it. Unified deployment architectures are the antipathy of a piecemeal approach and will see far greater prominence once the pandemic "work from home" edict has died down and "work from anywhere (even from the office!)" takes off."

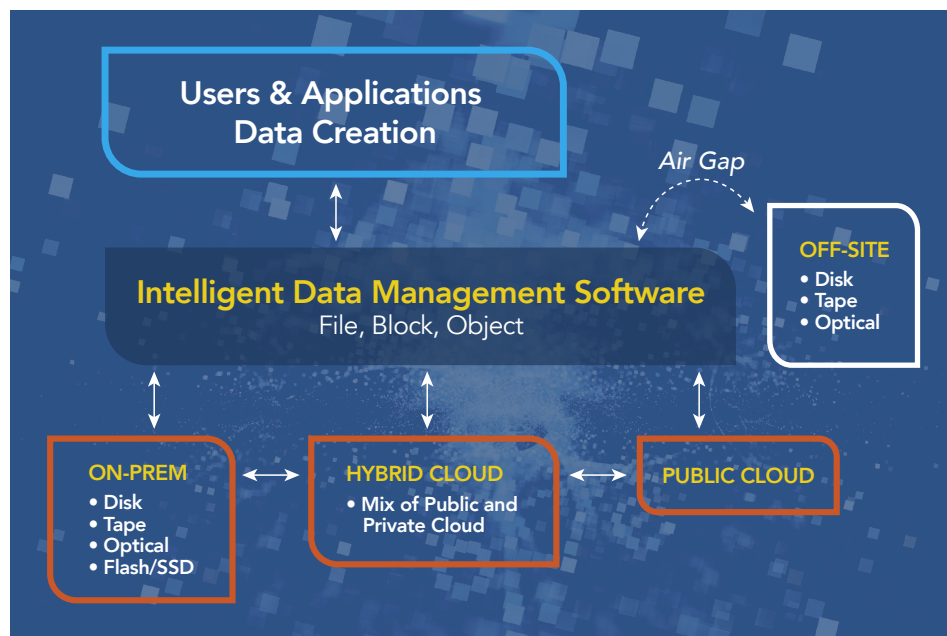
— Jonathan Morgan, CEO, Object Matrix

THE POWER OF ACTIVE ARCHIVING

Active archiving is the core technology response to managing fast-growing data for accessibility, security, compliance, and competitive advantage.

THE ACTIVE ARCHIVE

Integrates Intelligent Software and Scalable Storage for the Optimal Archive Solution



Unifying active archive is the key to discoverability, actionable analytics and increasing information value.

ACTIVE ARCHIVING SAVES MONEY

2020 proved to be an expensive proposition. Only 33% of corporate IT budgets shrunk because of the 2020 challenges, with the majority of dollars spent on mobile access and security enhancements.

A year later, exponential data growth continues to pressure data owners, driving archives to scale from terabytes to petabytes to exabytes within five years. And businesses are asking:

1. What is the technology that lets me store massive data and easily find it again?
2. How can I afford it?

It's a good question. Although the cost of secondary storage hardware has been declining year over year, the cost of data management software is rising. It's not uncommon to see data management software cost more than the storage medium on a per-capacity basis. This large storage management expense is not the easiest sell in the best of times. And given COVID-caused revenue shortfalls, it's an impossible sell for many companies hit hard by the pandemic.

But active archive systems have the answer to both questions.

THE IMPORTANCE OF BEING AI

“The data-centric model reduces the load on expensive primary storage. Emerging automation technologies based on AI use data and workflow intelligence to seamlessly manage data across any storage type.”

— Floyd Christofferson, CEO, StrongBox

“The industry is increasingly bringing the edge to the core and ensuring customers can gather data anywhere, store it forever and find it fast—all at affordable price points. The Active Archive Alliance is helping to bring the latest archiving technologies to a growing array of vertical industries and use cases—including video and digital asset management.”

— Brian Grainger, CRO and Board Member, StorMagic

“AI automatically unifies data and enables data-driven automation based on operational or situational intelligence.”

—Brian Morsh, SVP, WW Software Sales, Integrated Media Technologies Inc.

What is the technology that lets me store massive data and easily find it again? Active archiving’s data-centric software intelligence simplifies data accessibility across multiple storage mediums and locations. File- and workflow-driven policies automate data movement, migration, data protection, and retention within a transparent and accessible data structure. And air gap technology plus the ability to create and track multiple copies strengthen cybersecurity.

How can I afford it? Active archive stays highly affordable because it saves you money. The core system intelligence that keeps data highly accessible across multiple storage types and locations also automates data movement from expensive storage tiers to progressively inexpensive ones.

“These ‘100-year archives’ require intelligent active archive software incorporating smart data movers, data classification and metadata capabilities; along with highly scalable tape libraries, Redundant Arrays of Independent Libraries, or RAIL, and geo-spreading across regional zones for higher fault-tolerance, redundancy and availability.”

— Eric Bassier, Senior Director of Products, Quantum

A second opportunity for serious cost savings is data retention. With some retention requirements reaching a century, economic retention savings grow over time.

Of course, anyone can cheaply store files by executing a put-and-forget strategy to a cold storage tier.

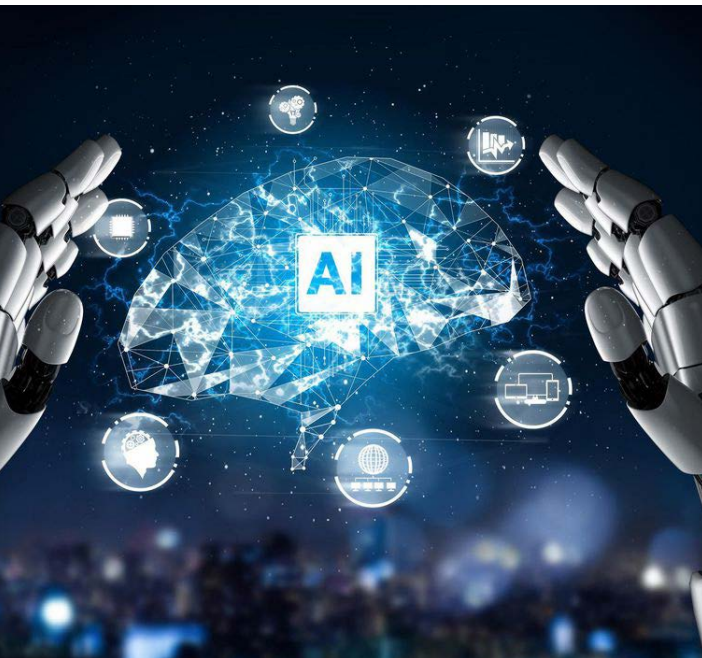
But without active archiving’s data intelligence and automation, that data movement occurs manually across multiple sources – assuming IT even knows where the aging files live and can easily locate them by classifying stored files. In this case, manual data movement isn’t easy, and it’s not accurate.

Instead, active archiving uses intelligent data management software to automatically classify and move data across multiple storage tiers and locations. This native intelligence keeps even aging data easily accessible while saving money and time. Since storage intelligence operates across multi-locational storage infrastructure, companies can better capitalize data value and cost-effectively store ever-increasing volumes for longer periods of time.¹

“On-premises tape-based active archives are typically not subject to egress fees and we will continue to see growing demand for this class of storage. On-premises archive solutions that offer an S3 interface, allowing the archive to be securely shared by remote users and other facilities, will be especially attractive.”

— Philip Storey, CEO, XenData

¹ “Yale New Haven Health Adopts Single Electronic Health Record and Saves \$2.6 Million Annually” MediQuant



ACTIVE ARCHIVING AI ANALYTICS

Without active archives, managing unstructured data throughout its lifecycle is a big expensive undertaking. With active archiving's AI-driven file and workflow automation, companies save money and time, keep files at any stage of their lifecycle accessible, and stay in compliance. Given exponential data growth that shows no signs of slowing down, active archiving goes from a helpful-to-have to a mission-critical system.

Active archiving works freely across flash, hard disk, tape, and the cloud, so data remains highly accessible and economically stored by individual file value and compliance/retention requirements.

Data-based movement, or data centricity, is central to active archiving. For example, data-driven automation founded on AI technology streamlines the transfer of large data workflows from on-premises to archive tiers on the cloud. Accelerating the process and accurately predicting the cost and time to move the files enables users to make intelligent business decisions and minimize project costs.

"Software-based object storage supports HSM and ILM and takes advantage of mass storage technologies such as tape. It will become increasingly important in active archiving."

— Thomas Thalmann, CEO, PoINT Software & Systems GmbH

ACTIVE ARCHIVING IN THE CLOUD

Artificial intelligence (AI) will treat the cloud as another storage tier, enabling fast and intelligent data movement between on-premises and cloud tiers.

Few companies will adopt cloud-only active archiving. The hyperscale public clouds – primarily AWS and Azure, with Google Cloud in the running—are popular for low-cost cold storage tiers. However, this economic model only stays that way if the data rarely leaves the tier. Ingress is inexpensive; egress is not—making cold storage unsuitable for retrieving and analyzing archival files.

Hybrid cloud is another matter. Active archiving will use cold storage tiers if IT teams are confident that the archived files do not need to be retrieved. However, they can direct their AI to keep archived data accessible on AWS S3 or Azure Blob. This hybrid infrastructure keeps archived data quickly accessible without the high egress charges of cold storage.

Nevertheless, active archiving systems do not require a hybrid cloud component. Businesses with massive data collections may prefer to keep data accessible on-premises without incurring cloud storage costs.

Tape is the economical alternative to cloud in these cases and offers additional security with air gap defenses. Software-based object storage, compatible with flash, disk, or tape, can also be significantly important in this context.





HEALTHCARE DRIVES CHANGE

"U.S. regulations require a seamless flow of health information. Active archives store historical patient records to readily support fluid, standards-based information exchange for the benefit of stakeholders across the ecosystem."

— Shannon Larkin, VP Marketing & Business Development, Harmony Healthcare IT

"Better implementation of data privacy regulations like the GDPR and CCPA are driving change. The trend will give rise to greater demand for intelligent active archive solutions."

— Brendan Sullivan, CEO, SullivanStrickler

ACTIVE ARCHIVING BOOSTS CYBERSECURITY

Organizations moved fast to accommodate COVID-19 realities. Many of them took financial hits in 2020 thanks to lost customer revenue and spending money on critical infrastructure to support newly remote employees. In the urgency to get back up and running, cybersecurity took a dangerous back seat.

Cybercrime is fast becoming a major threat to business operations. The FBI reports that the severity of ransomware attacks increased 47% in 2020, with a 100% spike in the number of attacks since 2019.

By leveraging active archiving's intelligent data management software, organizations may cost-effectively amp up cybersecurity with multiple geo-distinct copies, encryption, and key management.

Active archives protect against cyberattacks by automatically placing multiple copies of data in multiple geographies, on multiple mediums, including off-site and offline.



HEALTHCARE DRIVES CHANGE

"Active archiving is quickly becoming a popular solution for healthcare standards and interoperability and is crucial to information-sharing workflows between providers and patients."

With the growing focus on interoperability and cybersecurity, the conversation will expand to include archived data among compliance requirements – especially relating to sharing data provider-to-provider and protecting a patient's access to and ability to share their own data."

— Dr. Kel Pults, Chief Clinical Officer, MediQuant

INDUSTRY CASE STUDY: HEALTHCARE

Healthcare data is a highly attractive target for hackers because it's a hot commodity on the dark web and a profitable ransomware target.

Industry ransomware attacks revved up fast during 2020. Iron Mountain shared these chilling statistics:

1. The *Wall Street Journal* reported that during October 2020, security experts tracked a 71% increase in ransomware attacks against U.S. hospitals.
2. Within two days of that same month, six U.S. hospitals were hit by ransomware attacks.
3. The FBI, HHS and Homeland Security's Cyber Security and Infrastructure Security Agency (CISA) warned healthcare providers to better protect themselves from ransomware pirates.

Harmony Healthcare IT suggests that healthcare organizations lockout cybercriminals and protect records with active archiving. Multiple silos of clinical, financial, employee or business data stored in outdated systems offer some of the most accessible entry points for hackers. And archived data — by the sheer nature of their age and diminished capacities over time — are more prone to vulnerabilities.

Active archive solutions for healthcare are most secure within a HITRUST-certified cybersecurity framework, including both physical and process security controls for strong data security and compliance. Healthcare data technology regulations require that protected data be stored in a secure format that is searchable and accessible to approved users. Active archives do this and much more, including automating archived data movement by compliant policies.²

HEALTHCARE: 10 CRUCIAL QUESTIONS TO ASK YOUR ACTIVE ARCHIVING VENDOR

1. Do you have designated resources assigned as Privacy Officer, Security Officer, and/or Compliance Officer on staff?
2. Do you have security credentials like HITRUST or other certifications or are you on a path to obtaining them?
3. Have you formally committed to and developed an employee security training, awareness, and reporting program with defined policies and procedures?
4. Do you routinely review and update your privacy and security policies and procedures to keep up to date with policy changes and security threats?
5. Will your data be fully secure while in transit and at rest?
6. What are your data validation standards to ensure support for data retention, compliance, and legal/audit requirements?
7. Do you offer features like Single Sign-On and role-based security?
8. Does your archive solution use robust auditing features to monitor initial and ongoing access?
9. Do you carry adequate cybersecurity insurance to protect all parties involved?
10. What certifications does your data center maintain? (if vendor will be storing your data)



² "Legacy Data to the Rescue," Harmony Healthcare active archiving case study

³ ePHI (Electronic Health Protected Information), PII (a general term meaning any sensitive data used to identify, contact, or locate a specific person)

⁴ SOC 2 (Service Organization Control: auditing procedure that ensures your service providers securely manage your data and customer privacy)

⁵ CSF (Cybersecurity Framework: standards-driven cybersecurity), HITRUST (Health Information Trust Alliance: popular CSF)



CONCLUSION

How can data-driven companies **thrive** during the global pandemic and in the changed world it leaves behind?

The shorter answer: Companies quickly adapt to massive market changes with active archiving for centralized data access, analytics, automation, and dynamic scaling.

The longer answer: If yesterday was about saving money on tiering inactive data, today is about deploying active archiving for cost savings, AI-automated data classification and movement, and securing archives. Acting now to adopt and expand active archives will enable businesses to survive fundamental market changes – now and into the future of an uncertain world.

“Both active and inactive data could be vulnerable to ransomware attacks. Review how and where you are protecting your data and emphasize storing an air-gapped, offline gold copy of data.”

— Tara Holt, Senior Product Marketing Manager, Iron Mountain

For more information on the **ACTIVE ARCHIVE ALLIANCE** or to learn more about an industry-specific active archive solution to meet your needs, contact:

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activearchive.com

ABOUT THE ACTIVE ARCHIVE ALLIANCE

The Active Archive Alliance is a vendor-neutral, trusted source providing end users with technical expertise and guidance to design and implement active archive solutions for intelligent data management. The goal of the Alliance is to encourage a multi-vendor effort to promote and align the awareness and technologies needed to meet the rapidly increasing requirements for archival data in the following ways:

- Active archives enable efficient access to data throughout its life.
- Active archives are compatible with flash, disk, tape, optical, or cloud (public or private), file, block, or object storage systems.
- Active archives help move data to the appropriate storage tiers to minimize cost while maintaining ease of user accessibility.

Note: The Active Archive Alliance includes representatives of FUJIFILM, MediQuant, Spectra Logic, Atempo, Harmony Healthcare IT, IBM, Integrated Media Technologies, Iron Mountain, Object Matrix, PoINT Software & Systems, QStar Technologies, Quantum, StorMagic, StrongBox Data Solutions, SullivanStrickler, Western Digital and XenData.

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