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Eight Simple Steps to Migrating eComms Data to the Cloud

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Cloud-based data archiving can cost up to 30% less than on-premise storage.[1]

In addition to cost, cloud archiving systems provide many other benefits – from scalability and resiliency, to ease of deployment and integration. Organizations looking to transition to the cloud can expect the process to be simple, straightforward, and quick – often taking only a few weeks to complete.

In this guide, we look at the primary advantages of cloud over on-premise archiving systems, and outline eight key steps and best practices to ensure a seamless and successful migration of historical data.

More and more organizations are considering migrating to the cloud due to surging on-premise storage costs, the rapid growth of Big Data, and the need for efficient and dependable access to it.

If your firm is thinking about making the switch, this guide will help you make an informed decision.

[1] How Cloud Email Archiving Setups Cost 30% Less than On-Premise Solutions by Niharika Bal/Mithi (w2018)

The Business Case for Migrating & Archiving Data in the Cloud

COST

On-premise and cloud-based archiving systems differ primarily in where computing and storage resources reside – and who owns, manages, and maintains them. Whether a firm chooses to build and maintain a data center onsite (capital expenditure/CapEx), or to subscribe to third-party data hosting and archiving services (operational expenditure/ OpEx), carries huge financial implications.

Here, we examine three CapEx items – software, hardware, and IT support – associated with operating an on-premise system, all of which cloud service providers absorb on behalf of their subscribers.

Software

Software procurement, management, and ownership varies significantly between on-premise and cloud environments.

Firms with an on-premise system need to purchase software outright, for deployment on their local servers or on enduser computers.

As part of ongoing maintenance, on-premise software must be updated regularly, and critical security patches need to be installed. Eventually, software needs to be replaced when a new version is released, or when it has reached the end of its useful life, typically in three to five years.

Gartner calculates the annual cost of owning and managing software can be up to four times the initial purchase cost.[2] By owning software, firms have to deal with not only the prohibitive cost of maintenance, but also the risk that their investment may become outdated before they are able to maximize it.

By contrast, firms maintaining a cloud archive use a third-party host's application as part of their service subscription. Cloud subscription fees are highly predictable, allowing firms to allocate their resources and forecast OpEx more accurately. Subscription costs are based on number of active users that firms can modify as needed.

In a cloud deployment, service providers assume all software ownership, administration, and maintenance costs. Installations, updates, and replacements are performed iteratively and seamlessly, often without customers even noticing.

[2] Gartner cited in Evaluating the Total Cost of Ownership for an On-Premise Application System by Marcin S. Grobelny/Kenny & Company (u.d.)

Hardware

In addition to software, on-premise systems require significant investments in hardware and infrastructure, which include:

- Real estate for data center or server room
- Data center or dedicated server room
- Servers, server racks, and related equipment
- Heating, ventilation, and air conditioning (HVAC) systems
- Backup generators and Uninterrupted Power Supply (UPS)
- Security, alarm, and monitoring systems

To keep pace with the latest technologies, much of the hardware needs to be refreshed or upgraded every three to six years, which means additional investments of time, money, and effort for firms.

With a cloud subscription, firms transfer the financial burden of building, operating, and maintaining a data center – and the security burden of capturing, storing, and preserving their eComms data – to their archiving service providers. Instead of making a massive capital investment upfront, firms pay lower, predictable, and recurring fees to maintain their archive.

IT Support

On-premise systems require ongoing monitoring, maintenance, and troubleshooting – 24x7x365 in many cases – by IT professionals. One recent study noted that on-premise systems need, at a minimum, one administrator each for system, network, and database.[3]

The same study reported that IT maintenance and support personnel is the largest component of an on-premise system's Total Cost of Ownership (TCO) – comprising approximately 20% of its annual upfront costs, and between 50% and 85% of total application cost.[4]

Migrating to the cloud provides enormous IT cost savings. Research conducted by Computer Economics found that companies spent 21% less on IT as a percentage of revenue, and 16% less on IT on a per-user basis, by making the switch.[5]

Migrating also allows resources to be leveraged more strategically. For example, firms can redirect some of their IT budget to business development and customer support teams focused on delivering better value to customers and improving the organization's bottom line.

The researchers found that as the IT personnel spend of cloud adopters dropped to 30.9% (from 42.3%), their investment in new initiatives rose to 31% (compared to only 20% for firms that stayed with on-premise).[6]

By migrating to the cloud, firms can also refocus their IT staff's responsibilities from procuring hardware and managing databases, to researching technologies and initiating processes that boost company efficiency and productivity.

SIMPLICITY OF DEPLOYMENT

The costly and demanding hardware, software, and IT requirements of on-premise archiving systems often mean long, difficult service deployments. In contrast, cloud deployments are quick, efficient, and – because they mainly take place remotely, within the archiving service provider's infrastructure – non-disruptive or invasive for firms.

After a firm has identified, selected, and delivered data for import and archiving, the cloud provider manages almost all other key processes – data testing, extraction, conversion, importation, and validation. The firm's role is primarily to assist with problematic files, review and sign off on reports at various stages of the deployment, and verify the imported data.

Cloud-based deployments typically take around two weeks to complete, in stark contrast to on-premise implementations that may take anywhere from several months to over a year, assuming the infrastructure already exists. In addition, as cloud resources are constantly at the ready, provisioning initial or additional users is easy and straightforward.

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[3] Ibid.
[4] Ibid.
[5] Computer Economics, "The Economic and Strategic Benefits of Cloud Computing" cited in How to Save Money with SaaS Software as a Service by Kent/Folderit (u.d.)
[6] Ibid.

RESILIENCY & AVAILABILITY

On-premise archiving systems rely on limited infrastructure and resources, which lead to poor performance and instability over time. Server failures and index corruption consume IT resources and lead to system degradation and downtime.

By contrast, cloud archiving systems are often hosted in active-active data centers with highly redundant and resilient application architecture. These data centers are designed to withstand hardware and network failures with little or no service interruption, ensuring archived data can be readily searched, accessed, and retrieved anytime.

The performance of cloud archiving systems is evaluated based on availability or uptime. Service Level Agreements (SLA) outline service uptimes, support response times, and data processing time objectives. The majority of cloud service providers specify a minimum uptime of 99.5% in their SLAs, while certain vendors guarantee that rate.

SLAs help ensure both vendor accountability and competitiveness. To earn the trust and business of customers, cloud service providers must continually strive to meet the provisions of their SLAs and Service Level Policy.

Cloud archiving service providers invest in system performance, stability, and availability at levels that few, if any, organizations operating an on-premise system can match. By engaging the services of a cloud provider, firms may be able to prevent downtime, and loss of efficiency, productivity, and revenues.

AGILITY & SCALABILITY

On-premise systems do not offer the flexibility that cloud systems do. For example, a firm with 1,200 employees, operating an on-premise system, may need to buy a 1,200-user version of an application outright – and deploy hardware and an IT team to support it – even if only 100 users will be using it initially.

Buying application, building out infrastructure, and hiring IT support for peak user levels is typically more efficient and cost-effective. Some software vendors may also have minimum purchase requirements for user licenses.

When firms make an investment, they expect it will pay for itself over time. If not all employees make use of the investment, or if it falls into disuse, the firm is stuck with a costly, underutilized resource that it may never be able to fully maximize.

Firms subscribing to a cloud archiving service do not have to invest in capital items. They can also alter the services they buy as headcount rises or declines, as new businesses are acquired, or as operations are divested – essentially turning a fixed cost into a variable one.

Agile and scalable, cloud archiving systems can dynamically scale for changing user counts and data volumes. Leading enterprise archiving systems are known to support hundreds of thousands of users in a single data repository, without speed or performance degradation.

Cloud archiving solutions allow firms to buy exactly the level of subscription they need at any given time, enabling their operating expenses and level of usage to be more accurately matched.

SECURITY & CONTROL

Historically, firms chose to host their data on-premise due to concerns over data security and control. Many firms believe storing their data outside their network firewalls, on third party-owned and operated servers, diminishes their authority and control over it – making them potentially more vulnerable to security and privacy breaches.

To alleviate these concerns, cloud archiving providers continually invest in the security, integrity, and availability of their systems and the data they store. They implement a broad range of security controls (too costly for many organizations to adopt), which may include:

- **Physical:** Restricted access to data center and office facilities; 24x7x365 security, surveillance and monitoring

- **Environmental:** HVAC systems, fire detection/suppression systems, UPS, and backup generators

- **Technical:** Stateful firewalls with malware and IPS inspection, a DMZ, network and host-based IDS/IPS, in-transit and at-rest data encryption, vulnerability scans

- **Organizational:** Comprehensive pre employment criminality and identity checks on employees, restricted and monitored employee access to customers' archived data

Cloud providers also maintain highly transparent data storage and management practices, and allow customers to control and review access to their data – including actions performed on it. Despite the multi-tenant architecture of data centers, data is logically segregated, preventing the risk of co-mingling.

As part of their commitment to security and compliance regulations, leading cloud providers undertake independent, third-party audits, such as the System Organization Controls (SOC). Data centers and archiving applications undergo security, availability, and processing integrity control audits, while internet-facing systems are subjected to penetration testing ('ethical hacking').

6

EASE OF INTEGRATION & ACCESS

Cloud archiving provides an efficient way to manage company data for business continuity, risk mitigation, and compliance monitoring and supervision.

On-premise company data is often stored in multiple silos – typically consisting of disparate servers, employee computers, and physical media such as CDs, DVDs, and backup tapes – with several copies and no single source of indexing or access.

This makes it difficult to monitor and supervise data, let alone establish a single system of record. Searching for and producing data from on-premise systems can also be exceedingly slow, and often fail when the export times out or if servers run out of resources.

Cloud archiving systems consolidate current and historical data in one secure, centralized, and tamperproof database – where it can be efficiently supervised, searched, and retrieved. Cloud systems have unlimited bandwidth, ensuring that search and export performance remains stable, even as the size of a firm's archive grows. Users can granularly search across vast amounts of data, and quickly obtain relevant information for audits and legal requests, which have quick turnaround times.

While on-premise data may only be accessed by connecting to the company network, data in the cloud is accessible 24x7x365 from any device via the internet – facilitating information retrieval by remote employees.

7

An Eight-Step Pathway To Cloud Migration & Archiving Success

Cloud migration of on-premise historical data does not need to be costly or complicated. No matter the data import method used by the archiving service provider, customer firms can ensure a simple, seamless, and successful migration by following a few practical steps.

Here are eight best practices to ensure your firm's historical data is securely and accurately migrated to the cloud – preserved alongside your future eComms data for a wide range of business uses.
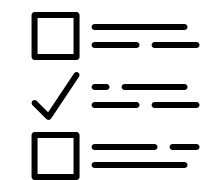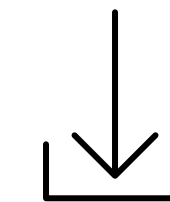
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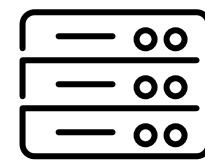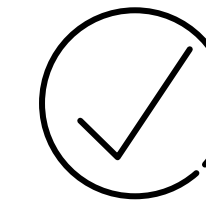
2. Determine data storage location

3. Collaborate with your cloud provider

4. Select & transfer relevant data for import

5. Review conversion & provide import direction

6. Verify historical data migrated to the cloud

7. Provide final project sign-off & instructions

8. Confirm ongoing archiving & functionality

8

1. DEFINE YOUR BUSINESS REQUIREMENTS

Before starting your cloud migration, define your business requirements and determine the needs of different stakeholders within your organization.

Examples of what different business units may require and expect of a cloud archiving system include:

- **Legal Team:** Support efficient eDiscovery searches, legal hold application, and case management – and enable timely production of evidentiary-quality copies of data that can withstand court and regulatory scrutiny

- **Compliance Team:** Satisfy the stringent recordkeeping, supervision, privacy, and data security requirements of the SEC, FINRA, CFTC, FCA, MiFID II, GDPR, and CCPA

- **HR:** Facilitate monitoring of employees for adherence to corporate and HR policies – and enable early detection of inappropriate behavior and insider threats

- **End users:** Preserve current data access rights – and provide quick, easy access to data

Evaluating your business requirements early and meticulously will help you determine the suitability of various cloud archiving solutions and providers, allowing you to make an informed choice.

2. DETERMINE DATA STORAGE LOCATION

Cloud archiving has shattered traditional geographical boundaries by providing anytime, anywhere access to data. While this has enormous benefits, it has also created a variety of legal and technical challenges, especially as compliance recordkeeping rules worldwide grow in number and complexity.

That said, you need to know exactly where your data is going to be stored – and who, outside of authorized users within your organization, might be able to access it. Ensure your data is stored in a 'data-safe' zone, which strongly protects how personal information may be collected, used, and disclosed.

As you map your data's future location, determine as well if your chosen archiving service provider operates green data centers. Data centers use a lot of electricity to cool servers, which produces greenhouse gases and causes global warming. Ensuring your cloud provider uses green technologies is not just smart business practice, but ecologically accountable entrepreneurship as well.

3. COLLABORATE WITH YOUR CLOUD PROVIDER

Cloud migration is a highly collaborative process between a firm and the archiving service provider.

Your IT staff knows your archived information and storage requirements better than anyone in your organization does. To ensure an efficient migration, leverage your existing IT staff to collaborate with your archiving provider throughout the process.

Before starting the migration, your IT team and archiving provider should establish timelines, determine migration priorities, and set expectations for every stage of the project. Persons responsible for such key tasks as identifying and selecting data sets, performing exports, validating imports, and signing off on the project also need to be designated.

4. SELECT & TRANSFER RELEVANT DATA FOR IMPORT

Consider the migration process as your opportunity to get rid of data that no longer serves a business, legal, or regulatory need. To that end, audit your data repositories, and select only data that really needs to be imported.

Determine data range, verify data structure, and confirm that all your data types and formats are supported by your archiving service provider. EML, MSG, PST, NSF, and MBOX are standard, and universally accepted, formats.

For safety, encrypt your data files when transferring them to your archiving provider via hard drives, NAS devices, or an SFTP site. To protect against loss or damage during transport, make a copy of data being transferred, and ship it using a trackable method.

Also, provide encryption passwords or keys to your archiving provider using a channel different from that used to transfer data. Passwords for encrypted data should not accompany the hard drives or devices holding the data.

Carefully select data for import – the migration process is your opportunity to get rid of data that no longer serves a business, legal, or regulatory need

5. REVIEW CONVERSION & PROVIDE IMPORT DIRECTION

Upon receipt of your files, your archiving provider will convert them into an importable format – and analyze for extraction and conversion errors. These errors may include corrupt or empty files, unsupported data types, missing or out-of-range date headers, and malformed messages.

Your cloud provider will usually generate a Data Conversion Report, detailing the number and volume of converted and failed messages. The report can also include a request for replacement copies of corrupt and failed data files.

To ensure all pertinent data is successfully migrated, carefully review this report and provide any replacement files, before instructing your archiving service provider to import your data into the cloud.

6. VERIFY HISTORICAL DATA MIGRATED TO THE CLOUD

After your data has been migrated, your archiving provider will generate an Import Summary Report, documenting:

- Total message counts and volume
- Successfully imported and failed messages
- Messages that could not be migrated
- The number of de-duplicated items

The Import Summary Report is usually the final report, so make sure you review it thoroughly. Verify data in your cloud archive by:

- Comparing imported and exported message counts
- Comparing imported data against source data
- Reviewing a representative data sample
- Reviewing all data types that have been imported
- Asking end users within your firm to verify their data

7. PROVIDE FINAL PROJECT SIGN-OFF & INSTRUCTIONS

When satisfied with the results of your own review, sign-off on the migration project.

Ensure also that hard drives and other physical media used to transfer your data files are returned to you or securely destroyed according to industry standards, such as those outlined in the NIST Guidelines for Media Sanitization.

8. CONFIRM ONGOING ARCHIVING & FUNCTIONALITY

Once migrated to the cloud, verify all your current data is being captured from source messaging systems, and preserved in your archive alongside your historical data.

Ensure that your authorized users receive appropriate access to stored data – and the archive tools and functionality available to them.

For example, your compliance, legal, and HR teams must have the appropriate tools and entitlements to enable them to efficiently manage, control, enrich, and profit from your data. These can include tools for:

- Advanced data search, supervision, and retention
- eDiscovery, legal hold, and case management
- Analytics, data visualization, and relationship mapping

As part of ongoing data security checks, your firm's authorized administrators should periodically review audit trails and event logs, which record all actions performed on a message (including who viewed it – and when), and changes to user accounts, access, and activities.

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So there you have it – an eight-step pathway to cloud migration. Following these simple steps will ensure your on-premise historical data is seamlessly migrated to the cloud, and enable you to maximize one of your most valuable business assets: your archived communications.

Migrate to the cloud and maximize one of your most valuable business assets: your archived electronic communications data

Looking for a comprehensive, dependable, and compliant cloud archiving solution?

Global Relay is here to help.

Global Relay provides cloud-based archiving, information governance, surveillance, eDiscovery, and messaging solutions to over 20,000 organizations in financial services, energy, government, healthcare, retail, media, and more. Global Relay helps organizations manage, control, and profit from their eComms data.

Global Relay has successfully migrated numerous firms' historical data to the cloud for compliance recordkeeping, supervision, and business continuity. The company's proven method ensures data is migrated securely, completely, and accurately to Global Relay Archive.

Global Relay Archive is an industry-leading platform that meets the rapid-search and Big Data-storage requirements of enterprise firms. It captures and preserves over 60 types of eComms, collaboration, and trade data in real time – making them available for instant search, analysis, and production.

For more information or a free consultation

Contact Us

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