Why Third-Party Archiving is Still Necessary in Exchange 2010

An Osterman Research White Paper

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EXECUTIVE SUMMARY

OVERVIEW
Microsoft offers native archiving capabilities in Exchange 2010, an implicit acknowledgement by the company that long-term retention and archiving of email is a best practice. However, while the archiving capabilities in Exchange 2010 are useful and are clearly a positive advance for Exchange-enabled organizations, these native archiving capabilities will not satisfy all archiving requirements. Consequently, most organizations should seriously consider the use of third-party archiving solutions to satisfy all of their retention and archiving needs.

KEY TAKEAWAYS
• The inclusion of native archiving capabilities in Exchange 2010 will raise the awareness of email archiving as a key best practice because decision makers will have these capabilities available as part of the core Exchange feature set.

• However, most organizations will want additional and more sophisticated capabilities that will drive them to third-party solutions, both on-premise and cloud-based.

• Exchange 2010’s archiving capabilities provide a number of useful features, including the creation of administrator-defined retention and deletion policies, support for basic e-discovery, searching across multiple mailboxes, automatic migration of content from each user’s mailbox into the Personal Archive available in Exchange 2010, and support for both Outlook 2010 and Outlook 2007 clients (the latter added in a Service Pack release).

• However, archiving in Exchange 2010 does not include a variety of capabilities that many organizations will require. These include single-instance storage, archival of data types other than email, sophisticated e-discovery capabilities, granular legal hold functionality, centralization of archives, or sufficiently rigorous compliance capabilities. Moreover, the native archiving in Exchange 2010 may be more expensive than the use of third-party solutions.

• While the archiving functionality in Exchange 2010 is sound, Osterman Research does not believe it will satisfy the majority of organizations’ more sophisticated and granular requirements for e-discovery, regulatory compliance, server management or storage management.

ABOUT THIS WHITE PAPER
EMC sponsored this white paper. Information about the company’s offerings is provided at the end of this paper.

CURRENT AND PLANNED ADOPTION OF EXCHANGE 2010

FORECAST OF THE ARCHIVING MARKET
Osterman Research forecasts that the total North American market for email/content archiving will increase from $675.4 million in 2011 to $1.3 billion by 2014, averaging annual growth of 24.5% per year during this period, as shown in the figure on the next page1.
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North American Archiving Market Forecast
2011-2014 ($ Millions)

Our research has discovered that 51% of organizations have already deployed an archiving system and that another 20% plan to do so by the end of 2012. However, 25% of organizations either are not sure of their archiving plans or have no intention of deploying one. However, when asked about the proportion of email and other electronic content that organizations archive – or would like to archive in the absence of an archiving system – we found that the vast majority would prefer to archive content today, with significant growth anticipated.

This data underscores the fact that most organizations want to archive content – this is true even for those organizations that do not have archiving technology in place or that rely on backups as their “archive”. This, in part, supports our rather bullish forecast for archiving through 2014, and the strong interest that Microsoft has generated by including archiving in Exchange 2010.

THE GROWTH OF EXCHANGE 2010

Osterman Research surveys have found significant growth in the adoption of Exchange 2010. For example, an October 2010 survey of mid-sized and large organizations in North America found that Exchange 2010 accounted for 11.6% of the on-premise users of Exchange. A January 2012 survey found that Exchange 2010 accounted for 47.6% of on-premise Exchange users – this figure is expected to be in excess of 60% by year-end 2012.

ARCHIVING IN EXCHANGE 2010

In the context of archiving, the rapid growth of Exchange 2010 will have two important implications:

• The inclusion of native archiving capabilities in Exchange 2010 will raise the awareness of email archiving as a key best practice simply because decision makers will have these capabilities available as part of the core Exchange feature set.

• As discussed in this white paper, while the native archiving capabilities in Exchange 2010 are adequate for some applications, most organizations will want
additional and more sophisticated capabilities that will drive them to third-party solutions, both on-premise and cloud-based.

With regard to the latter point, it is important to note that the purpose of this white paper is not to denigrate the native archiving features and functions provided in Exchange 2010. In fact, we believe that Microsoft has taken a positive step forward by including archiving capabilities natively within Exchange 2010. However, the diversity of archiving requirements will require additional capabilities that are either not available or are not as easy to realize using the archiving capabilities in Exchange 2010. This will drive organizations to adopt third party solutions in what we believe will be significant numbers.

WHY YOU NEED TO ARCHIVE EMAIL

There are a variety of reasons to archiving email and other electronic content. While the reasons will vary from one organization to another and across different industries, there are three basic reasons to archive content.

LEGAL CONSIDERATIONS

Legal drivers are typically among the most important considerations for deploying archiving solutions, particularly in the rather litigious US market. Legal drivers for deploying archiving solutions can be broken down into three primary areas:

• **E-discovery**
  The searching of electronic data stores for relevant information during a legal action, the extraction of this data for analysis by paralegals and attorneys, and the presentation of information to various parties, is the leading driver for archiving in many organizations. Because large organizations in particular must produce information from their email archives on a somewhat regular basis, many organizations use e-discovery as a key justification for the deployment of archiving.

• **Legal holds**
  Legal holds are another important driver for deploying archiving capabilities, since relevant information must be retained indefinitely after a legal action has been initiated or when decision makers can reasonably expect that such an action is forthcoming.

• **Early case assessments**
  Whether formal or informal, the ability to perform early case assessments is another important driver for archiving. The ability to search an archive of email or other electronic content can be invaluable in helping senior managers, legal staff or outside attorneys perform assessments of an organization’s legal position or its ability to produce relevant data before a legal action has commenced or during its early stages.

REGULATORY CONSIDERATIONS

Not wholly unrelated to the legal drivers for implementing an archiving capability are regulatory drivers. For example, there are at least 10,000 different statutory requirements in the United States to retain business records, regardless of the format in which they are stored. A small sampling of these requirements include the following:

• **Financial services**
  In the United States, SEC and FINRA require that certain securities transaction records must be retained for three to six years. For the first two years, such records must be kept in an easily accessible place. A failure to retain records can result in monetary penalties totaling millions of dollars, as well as censures and cease-and-desist orders.
In the United Kingdom, the FSA requires, among other things, that firms must take reasonable care to make and retain adequate records of matters and dealings (including accounting records) that are the subject of requirements and standards under the regulatory system.

The European Union (EU) Markets in Financial Instruments Directive (MiFID) Article 25(2) requires that investment firms must keep the relevant data relating to all transactions in financial instruments that they have carried out, whether on their own account or on behalf of a client, for at least five years.

In Canada, the Investment Industry Regulatory Organization of Canada (IIROC) Universal Market Integrity Rule 10.12-1 requires that a record of each order to purchase or sell securities must be retained for a period of seven years from the date the order record was created, and for the first two years, such record must be kept in an easily accessible location.

• **Energy**
  In the United States, certain non-public, electronic transmission function information exchanged between transportation and marketing function employees must be retained for a five-year period according to FERC requirements.

• **Healthcare**
  In the United States, health plans, health plan clearinghouses and healthcare providers (e.g., physicians, nursing homes and clinics) must retain electronic health records for six years from the date of their creation or the date when they last were in effect, whichever is later. Medicare requires that in most cases, clinical records must be retained for five to six years from the date of discharge or last entry.

  In the United Kingdom, the Department of Health has established guidelines for the retention of various types of health records. Examples include electronic patient records held by General Practitioners (to be retained indefinitely), standard operating procedures (in perpetuity if electronic), ward pharmacy requests (one year) and audit trails for electronic health records (to be retained indefinitely).

• **Pharma**
  In the US, the FDA requires that records related to food receipt, release and processing must be retained from six months up to two years; records related to non-clinical lab studies must be retained from two to five years; and records related to drug receipt, shipment and disposition must be retained for two years after a marketing application is approved for the drug.

• **Publicly-held corporations**
  In the United States, the Sarbanes-Oxley Act of 2002 requires that accountants of publicly-held corporations must retain for seven years certain records and workpapers relevant to the audit or review of such corporations’ financial statements.

  In the United Kingdom, the UK Companies Act of 2006 requires that records of corporate resolutions, meetings and decisions must be kept at least 10 years from the date of the resolution, meeting or decision (as appropriate). Accounting records must be preserved by a private company for three years from the date on which they are made and by a public company for six years from the date on which they are made.

• **State and local requirements**
  Many state, provincial and local governments have requirements to retain public records under Freedom of Information, “sunshine law” or related requirements. In the United States, in the event of a request for public information, “sunshine laws may require production of relevant information within a given time frame, depending on state.”
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- **Other requirements**
  There are a wide variety of other requirements that control the retention and management of data. For example, the Hong Kong Personal Data (Privacy) Ordinance requires that data users are required to ensure that personal data is accurate, up-to-date and kept no longer than necessary. Data users must also keep a logbook that tracks their refusals to access or correct personal data, and each such record of refusal must be kept for four years after they were entered.

### FUNCTIONAL CONSIDERATIONS

Another important reason to archive email is the functional benefits that email archiving can provide, including the following:

- **Email server management**
  An archiving capability, by offloading email and attachments from email servers to archival storage, can eliminate most of the content from these servers. The result is that backups take much less time to complete, restoration of content to an email server after a crash or other problem is much faster, and email server performance as measured by message delivery time and reliability improves.

- **Employee productivity**
  A user-accessible archiving capability can permit end users to access their own archived content. This permits users to retrieve missing, deleted or old emails and attachments without having to ask IT to do this for them. Not only does this significantly reduce IT's workload, it make employees more productive by providing them with faster access to the content they need to do their work.

  Another important consideration in the context of employee productivity is the benefit that an archiving system can have on minimizing the time employees spend managing their mailbox content. Without an archiving system, employees must spend time filing, deleting or otherwise managing their content to stay under the mailbox size quota that roughly three in five organizations impose on their users. However, an archiving system, by automatically migrating content from mailboxes to the archive, allows IT to impose quotas on their users, but gives users what seems to be a mailbox of unlimited size.

- **Storage management**
  Osterman Research has found in numerous surveys that roughly five of the top ten problems in managing email servers are related to excessive storage, a problem that archiving addresses directly by migrating data to archiving storage. This not only reduces the overall cost of managing storage, but it reduces IT’s storage-related costs by enabling the deployment of high-performance, nearline storage to be delayed or eliminated altogether. Moreover, the use of purpose-built archive storage for deduplication and block deduplication can offer additional benefits, although they cannot be used with the archiving capabilities in Exchange 2010.

- **Business continuity and disaster recovery**
  An archiving system can also serve as an integral part of an organization’s business continuity and disaster recovery system. For example, in the event that the primary email system is inaccessible because of a natural disaster, power outage or even just routine system maintenance, an archiving system can serve as a secondary repository of email and other content, giving users access to their content during the outage of the primary system.

- **Re-use of data**
  Business decision makers may also want to re-use content for a variety of business purposes, such as analytics for purposes of analyzing trends or customer sentiment, or to provide business intelligence for users when dealing
with customers. An archiving system that enables easy access to this data is useful for these purposes.

ARCHIVING IN EXCHANGE 2010 IS A SOLID FIRST STEP
Exchange 2010’s archiving capabilities provide a number of useful features, including:

• The Personal Archive in Exchange 2010 is a separate mailbox that can be accessed by users in Outlook or the Outlook Web App. Content from the primary mailbox can be automatically moved to the Personal Archive using retention policies.

• Exchange 2010 permits the Personal Archive to be on the same or a different Exchange database from each user’s primary mail database, but users must be online to access archived email.

• Administrator-defined retention and deletion policies can be applied to content in Exchange 2010.

• Exchange 2010 archiving supports basic e-discovery capabilities and can filter messages and attachments by receiver, sender, receive/send dates, message type and other parameters.

• Multi-mailbox searches can be performed, with access rights given to specific users based on their roles, such as records managers or legal counsel.

Clearly, Microsoft has seriously considered the importance of archiving in the context of overall email management and it has provided a solid archiving capability, albeit one that will not satisfy the requirements of all Exchange-enabled organizations.

WHY THIRD PARTY ARCHIVING WILL STILL BE NECESSARY
There are a number of limitations in Exchange 2010 that will require the use of third party archiving solutions in Exchange 2010 environments:

• Lack of platform independence
Osterman Research has found that a clear majority of organizations – 59% – want an email archiving system to be platform independentii. In other words, three out of five decisions has a preference for an archiving system to work with any email platform and not be tied to a specific system.

A lack of platform independence is not necessarily a serious problem for content archiving vendors that focus on only one platform. For example, a number of highly successful email archiving vendors provide solutions that work only with Microsoft Exchange. That said, customers that operate multi-platform environments need the ability to archive from all of their systems. We anticipate that a growing proportion of new archiving solutions introduced over the next 12-18 months will be platform agnostic given the clear preference for such systems in the market.

• Lack of single-instance storage in Exchange 2010
Single-instance storage (SIS) in Exchange 2010 has been eliminated. While there are some sound reasons for doing so, such as improving the performance of Exchange servers in an era of falling storage prices, the use of single-instance storage is a key benefit of many third-party archiving systems and one that many IT administrators will want to maintain. For example, storage requirements are significantly greater without SIS. Moreover, storage optimization becomes more essential over the long term as different content sources archive the same data – SIS ratios tend to improve over time when the
technology is available. Without SIS, migrating personal folders (PSTs) to Exchange 2010 will also increase storage overhead – PST files will end up in the Exchange stores as-is, with no reduction in size. This data will then be replicated inside the DAG and require large amounts of storage for essentially redundant data. Also, as PSTs are pulled into the Personal Archive, users lose the offline capability to access that data at any time. This data would need to be connected to Exchange in order to access the data after migration.

While Exchange 2010 may use less expensive storage through tiering, this advantage is at least partially negated by the elimination of SIS. The use of third party deduplication technology built into storage hardware, which Exchange cannot address, can provide additional benefits.

- **Exchange Servers do not experience load reduction**
  The archiving functionality in Exchange 2010 does not necessarily reduce the load on Exchange servers. Because the archiving system is on-server, content is not moved to slower and less expensive media, negating a key advantage available with many third-party archiving solutions. Moreover, a Personal Archive in Exchange 2010 has the same disk requirements as a standard mailbox. As a result, the Exchange infrastructure needs to support, at a minimum, what amounts to twice as many mailboxes as users.

- **Non-email content is not archived**
  Archiving in Exchange 2010 does not include public folder content, journaling or other data stores, such as Microsoft SharePoint or calendar/contact data in users’ mailboxes. Because the majority of organizations that archive want to retain all Electronically Stored Information (ESI), this is an issue that will require the use of third-party archiving solutions, at least for non-email content like SharePoint, instant messages, social media content and other data types. Because the use of multiple archiving capabilities will complicate and increase the cost of e-discovery and other litigation support functions, many organizations will likely opt for a single archiving solution that enables policy management and search using a single interface.

- **E-discovery capabilities are not sophisticated enough for many organizations**
  The e-discovery capabilities built into Exchange 2010 provide some useful e-discovery functions. However, they are unlikely to satisfy more sophisticated e-discovery requirements, nor can they satisfy privacy requirements in some cases, meaning that a third-party solution will still be required for most e-discovery exercises. For example, there is a lack of review capability in Exchange 2010 – instead, it relies on the e-discovery user accessing the search results in a mailbox and then trawling through the results manually. The work is difficult to split among lots of reviewers and so reviewing anything more than roughly 100 hits becomes a very time-consuming task. Moreover, e-discovery mailboxes have a storage quota of 50Gb, although the quota can be modified⁴. Finally, Exchange 2010 supports indexing of roughly 50-60 different file types, whereas third-party solutions can support many times this number.

- **Exchange 2010 archiving works only with Outlook 2010 and 2007**
  The archiving capabilities in Exchange 2010 initially required the use of Outlook 2010 and a corresponding enterprise Client Access License (CAL), although the December 2010 Cumulative Update for Office 2007 added support for Outlook 2007. This means that Outlook 2007 users can now access Personal Archives in Exchange 2010 mailboxes (albeit without the ability to manipulate archive tags), but users of earlier versions of Outlook cannot do so, including Outlook for Mac users. Interestingly, archiving in Exchange 2010 requires the use of the more expensive Office 2010 Professional Plus for Outlook, whereas support for Outlook 2007 was provided at no charge. Some third-party archiving solutions will enable end users to access their archives through Outlook 2003 and Outlook for Mac.
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• **Legal holds may not be adequate**
  In Exchange 2010, only an entire mailbox can be placed on hold. It is possible that an individual's mailbox could be on hold via several different cases meaning their items never get deleted from the store resulting in enormous storage requirements.

Moreover, Exchange does not create a separate copy of the respective mailboxes. It ensures that when a user’s mailbox is on legal hold and he or she attempts to modify or delete an item from it, a copy of that item is stored in the Exchange dumpster for safe keeping. The user cannot access or see this item and so may believe it has been deleted. However, an e-discovery user can still search and discover against it.

• **Retention controls may not be adequate**
  Other than for mailboxes that are on legal hold, users are primarily in charge of retention tagging. This can result in the deletion of content from an Exchange 2010 mailbox that should be retained in compliance with corporate policies. Some third-party solutions offer much more robust controls over content retention.

• **The cost of Exchange 2010 archiving may be higher than for third-party solutions**
  Although archiving is native to Exchange 2010, the use of Personal Archives requires an Exchange Enterprise CAL in addition to the Standard CAL, not to mention the extra storage required to host potentially very large Exchange stores. This combination may actually be more expensive than a Standard CAL in combination with a third-party archiving solution. This also applies to the cost of archiving when used in conjunction with Office 365.

• **Other limitations**
  One source found that the indexing and search capabilities in Exchange 2010 could result in various problems, including corruption in lists of search terms, non-preservation of location context or metadata properties of content, and other problems’.

These issues are summarized in the table below.

<table>
<thead>
<tr>
<th>Exchange Limitation</th>
<th>Implications</th>
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<tbody>
<tr>
<td>Lack of platform independence</td>
<td>Most decision makers prefer a system that is platform independent; will not be adequate in multi-platform organizations.</td>
</tr>
<tr>
<td>Lack of single-instance storage (SIS)</td>
<td>The benefits of eliminating SIS may be partially or completely offset by higher storage and e-discovery costs.</td>
</tr>
<tr>
<td>Lack of load reduction</td>
<td>Could potentially lead to lower server loadings and higher costs.</td>
</tr>
<tr>
<td>Non-email content is not archived</td>
<td>Organizations increasingly need to storage non-email content, such as SharePoint data, instant messages, social media posts, etc.</td>
</tr>
<tr>
<td>E-discovery capabilities may not be sophisticated enough</td>
<td>Many organizations require highly granular and sophisticated e-discovery capabilities to satisfy complex requirements.</td>
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</tbody>
</table>

Organizations increasingly need to storage non-email content, such as SharePoint data, instant messages, social media posts, etc.
Summary of Archiving Limitations in Exchange 2010 (concluded)

<table>
<thead>
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<th>Exchange Limitation</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Works only with Outlook 2010 and 2007</td>
<td>While satisfying most users, those on Outlook 2003 cannot take advantage of archiving in Exchange 2010.</td>
</tr>
<tr>
<td>Legal holds may not be adequate</td>
<td>Spoliation of data can lead to serious problems, significant legal judgments and the like.</td>
</tr>
<tr>
<td>Retention controls may not be adequate</td>
<td>Given strained IT budgets in many organizations, this can be a serious issue for many.</td>
</tr>
<tr>
<td>Cost of archiving may be higher than for third-party solutions</td>
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RECOMMENDATIONS FOR ARCHIVING IN EXCHANGE 2010

Any organization that is considering deployment of archiving capabilities in Exchange 2010 should undertake a five-step approach to evaluating their archiving requirements:

1. UNDERSTAND THE NEED TO ARCHIVE

   First and foremost, organizations need to understand that archiving is fundamentally about retaining corporate records as a best practice, not an option that applies only to “regulated” firms like broker-dealers or healthcare providers. Although the level of regulatory requirement to archive will vary based on the industry in which an organization operates, all organizations have some level of regulatory obligation to retain their business records. Moreover, virtually every company has legal obligations to retain records in the event they are involved in litigation, either as a defendant, plaintiff or otherwise involved third party. Finally, archiving is a best practice from a purely functional standpoint – to enable users to have offline access to their email and other content, to improve email server performance and reliability, and to speed backup and recovery operations by reducing the storage footprint of primary applications.

2. DEVELOP, IMPLEMENT, ENFORCE AND UPDATE POLICIES

   Every organization should develop policies focused on the retention of important content in email and other electronic systems. However, many organizations do not have email retention policies and, among those that do, these policies are often not sufficiently well defined or granular. Part of the problem is that many decision makers view business records in email incorrectly. For example, in a February 2012 survey conducted by Osterman Research, we discovered that senior management in 18% of the organizations surveyed viewed email content as “transitory” and not worthy of long-term retention. Another 46% viewed records in email as important, but subject to retention only by employees. Only 35% of the organizations surveyed hold the view that records in email are important and should be managed by IT according to corporate policies.

   Best practices for archiving should include development of granular policies that focus on the types of content that should be retained, the length of time that specific types of records will be kept, and how these records will be managed. The initial development of the policies, as well as their ongoing review and updates, should be informed by advice from internal and external legal counsel, regular review of the regulatory obligations to which an organization is subject, and best practices used in other, similar organizations. Moreover, enforcement of these policies should be automatic via an archiving system that automatically retains content. The ultimate goals of archiving are to reduce corporate risks and costs.
3. **CONSIDER CONTENT CLASSIFICATION**
   It is also important to consider the classification of email, using the retention policy, default policy or personal tags in Exchange 2010; or a third-party classification solution. Classifying content can make it easier to a) identify information that should be retained and b) assign unique retention periods. In addition, some third-party solutions leverage classification to tag information, making search for that information faster and easier.

4. **CONSIDER MICROSOFT OFFICE 365**
   Decision makers should also consider a potential migration to Office 365, something that many organizations are seriously reviewing for some or all of their users. While Office 365 is a robust offering that includes a number of useful features, there are some important issues to consider when evaluating the archiving capabilities in Office 365 relative to third party solutions. For example:
   
   - Microsoft Plans E1 and E2 offer only a Personal Archive option – Plans E3 and E4 offer both Personal Archive and Advanced Archive.
   - Exchange Online archiving is available only with the E3 and E4 bundles as well as Exchange Online 2, but cannot be added as an a la carte option to E1 or E2.
   - While third party archiving tools can be used with all of the Enterprise bundles, the P1 bundle does not provide for journaling control, so there is no real option to add archiving to that offering.
   - Plan E1 requires the archive to share the 25 gigabytes of space between each user’s mailbox and their personal archive, whereas Plan 2 allows an archive of unlimited size, although a default quota of 100 gigabytes is provided in Plan 2 – this quota cannot be modified without intervention by Microsoft.
   - Just like with Exchange 2010 on-premise, there is a 50-mailbox search limitation with Office 365\(^v\). Moreover, to enable Microsoft’s e-discovery capabilities requires deployment of the E3 offering, a 50% price increase compared to E2. Inactive mailboxes, such as those for employees who have left the company, still need to be paid for as if they were active for retention/e-discovery purposes.

   More information about Office 365 is available in the Osterman Research white paper *Making Office 365 More Secure and Compliant*\(^vii\).

5. **COMPARE AND CONTRAST ARCHIVING CAPABILITIES**
   Finally, a thorough evaluation of the native Exchange 2010 archiving capabilities should be undertaken and compared with third-party solutions. While the former will likely satisfy organizations’ basic archiving needs, most organizations will need third party solutions in order to satisfy more sophisticated e-discovery capabilities, to centralize their archives and to maintain SIS capabilities.

   Consider the upgrade process itself. A third party archiving solution can help reduce the size of mailboxes prior to migration, and this means you can migrate less active data to Exchange 2010. It is also important to note that this evaluation does not necessarily need to be an all-or-nothing proposition: the native archiving capabilities in Exchange 2010 may be adequate for some users, while others may need third-party solutions for more sophisticated archiving requirements.
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1 Source: Content Archiving Market Trends, 2011-2014; Osterman Research, Inc.
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