Can AWS or Azure Be Your Next Content Services Platform?

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Initiatives: Digital Workplace Applications and 1 more

Cloud object storage such as AWS and Microsoft Azure provide alternatives to out-of-the-box content storage and archiving solutions. Application leaders can use these capabilities to modernize many of their expensive legacy content services investments.

Overview

Impacts

■ Cloud storage is increasingly being considered as a cost-effective, scalable alternative to content services platforms.

■ Cloud storage enables an assemble-your-own content storage capability but it must coexist with other CSP and cloud office capabilities.

Recommendations

Application leaders responsible for digital workplace applications should:

■ Use cloud object storage as a replacement for document management use cases when scalability and cost are key drivers.

■ Avoid building their own CSP or creating another content silo in cloud object storage by developing a coexistence strategy for CIPS, CSP and cloud office.

Analysis

Content-dependent digital business capabilities support critical workloads and often depend on legacy content services platform (CSP) implementations. Cloud infrastructure and platform services (CIPS) providers now supply cloud object storage and other services. Such services could enable an assemble-your-own CSP to support digital business with lower cost and improved scalability. However, CIPS are far from an out-of-the-box solution. Application leaders need to determine if cloud object storage is an appropriate part of their content services strategy. If so, what are the critical considerations of this approach?
Impacts and Recommendations

Cloud Storage Is Increasingly Being Considered as a Cost-Effective, Scalable Alternative to Content Services Platforms

Content services platforms support a wide variety of use cases, including:

- **Document management** — Includes a standard set of library services (such as metadata, versioning, check-in/check-out and document viewers) that support multiple content formats.
- **Records management** — A secure corporate repository to support records management, regulatory compliance and business continuity.
- **Integrated business applications** — Integration of content capabilities into common horizontal (HR, finance, corporate legal) and vertical (insurance, education, manufacturing) applications.
- **Content application composition** — The ability to configure and define content-centric applications through the tight integration of content services and business processes.
- **Team workspace** — Supporting individuals and knowledge workers who need access to relevant content in the context of their project in a consolidated workspace.

Cloud object storage from providers such as Google, Alibaba, Amazon and Microsoft have a potential role to play in the document management use case. This section will look at how you could integrate these capabilities into your strategy when scalability and storage costs are key drivers.

Gartner defines the core and optional capabilities for CSP providers in Table 1. Solutions in this market all provide an out-of-the-box solution for the core capabilities. A majority of the tools have the optional capabilities as well at various stages of maturity.
The critical choice for application leaders is whether it is worth building the core capabilities on a cloud object storage service, especially when those same capabilities are available out of the box from a CSP. It is worth emphasizing that many legacy CSP implementations are currently providing simple, postprocess document storage. In addition, clients who are looking at the option of building their own CSP do not intend to build a product that matches the breadth of capabilities represented by leaders in this market space.

### Table 1: Content Services Capabilities

<table>
<thead>
<tr>
<th>Core</th>
<th>Optional</th>
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<tbody>
<tr>
<td>Content repository</td>
<td>Content intelligence</td>
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<tr>
<td>Document and content management library services</td>
<td>Productivity intelligence</td>
</tr>
<tr>
<td>Records management</td>
<td>Collaboration</td>
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<td>Process automation</td>
<td>New work nucleus connectors</td>
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<td>Open APIs</td>
<td>Business application connectors</td>
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<tr>
<td>Security and privacy controls</td>
<td>Federation</td>
</tr>
<tr>
<td>Metadata</td>
<td>PaaS/SaaS deployment</td>
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<tr>
<td>Search</td>
<td></td>
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<tr>
<td>Enterprise administration</td>
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<tr>
<td>Reporting</td>
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<td>Mobility</td>
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</tbody>
</table>

See Note 1 for definitions.

Source: Gartner (July 2020)

The reference architecture in Figure 2 shows the core capabilities of a CSP aligned with the larger content services ecosystem present in most organizations. Cloud object storage is potentially viable as a replacement for a subset of the document management use case listed at the beginning of this section.

**Figure 2: Content Services Platform Reference Architecture**
To achieve basic document management functionality, you would also need object storage, a database and a search tool. While this might seem modest compared to the core capability requirements for a CSP, you could replace a large number of legacy CSP implementations, such as:

- **E-statement and e-billing archive** — Large image storage environment requiring a connection to a customer web portal.

- **Business application support** — Many legacy CSP implementations are simply storing documents and images to support a business process such as mortgage, claims or underwriting. Very often the documents themselves are just attached to a case or workflow for reference. The workflow, security and user interface are all provided by the business application.

- **Static archive** — Organizations commonly use legacy CSP systems to simply archive content. This is done until the content can be deleted in accordance with regulatory and compliance
mandates. To add records management functionality to a cloud storage capability, you can use a federated records management tool or a CSP.

The legacy platforms these implementations were built upon are becoming unmanageable due to the size of the repository and database. For example, enormous relational databases are struggling to return search results in reasonable amounts of time. From an infrastructure standpoint, the software and hardware are often very old. Many organizations struggle to justify the cost of replacing these simple use cases with a modern CSP. Cloud storage addresses both of these issues without sacrificing the rather modest technical requirements to provide a replacement.

Recommendations:

- Use cloud object storage as a replacement for document management use cases when scalability and cost are key drivers.

- Take advantage of a CSP modernization initiative by considering cloud storage as a potential alternative to a CSP for basic document management use cases. Do not simply assume that a CSP is the best replacement for a legacy implementation.

Cloud Storage Enables an Assemble-Your-Own Content Storage Capability but Must Coexist With Other CSP and Cloud Office Capabilities

Cloud object storage is not a replacement for a CSP. Instead it should be viewed as an additional tool in the content services toolbox, alongside a CSP. As illustrated in Figure 2, cloud object storage along with a cloud office tool and CSP can be used to strategically serve the ever-growing needs for content services.

Application leaders should attempt to maximize their investment in cloud office and reduce the support of duplicative capabilities in a CSP. In “Office 365 Requires a Content Services Coexistence Strategy to Support Digital Business,” we outlined guiding principles to that end. There will be a similar push from organizations attempting to use cloud object storage as a replacement for a CSP. The motivation is cost reduction and portfolio rationalization. But even though CSP, CISP and cloud office all provide content management capabilities, they provide the best value when used correctly in combination.

- The unique value of a CSP is twofold:

  - Federation — The central administrative capability to define and enforce policy (security, privacy, records, compliance) across all content repositories.

  - Content services applications — Tools to develop and deploy feature rich, process-specific solutions such as contract management, employee file management, etc.

- CIPS provide low-cost, highly scalable content storage.
Cloud office provides the foundational content creation, collaboration and work-in-progress services.

Any attempt to force one of the above to be an all-purpose multitool for the organization will increase cost and complexity. This has been illustrated repeatedly in legacy CSP implementations (see “Reinventing ECM: Introducing Content Services Platforms and Applications”).

This means that CSP strategies should begin to judge their CSP less on the ability to cover each and every content service requirement and instead focus on:

- Ability to support federation — enforcing records management in CIPS and cloud office
- Content application composition capabilities
- Business application connectors

Cloud storage should be viewed as the preferred capability for static archiving and postprocess content storage. Cloud office solutions will provide the foundational place where employees create and collaborate on content.

**Recommendations:**

- Avoid building your own CSP or creating another content silo in cloud object storage by developing a coexistence strategy for CIPS, CSP and cloud office.
- Position your CSP team to support the future content needs of the entire organization by recruiting participants from cloud infrastructure, cloud office and other content-dependent LOB systems. These participants will provide essential insight into the ever-growing needs for content services across your company.

### Note 1: Definitions for Table 1

**Table 2: Definitions for Table 1**

<table>
<thead>
<tr>
<th>Core capability</th>
<th>Minimum feature set</th>
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<tbody>
<tr>
<td>Content repository</td>
<td>■ Large-scale content repository capable of storing tens of millions of content objects and related metadata in a single customer instance</td>
</tr>
<tr>
<td></td>
<td>■ Ability to store all content types regardless of format</td>
</tr>
</tbody>
</table>
| Document and content management library services | Ability to upload content and create new content from scratch within the platform  
|■ Native document management capabilities which allow users to work directly on content stored in the platform with facilities to check in/out and create new versions  
|■ Ability to track and maintain version history  
|■ Provision of templates for the creation of new content |
|---|---|
| Records management | Ability to create and manage retention policies which define how long content is retained when it gets to a certain state  
|■ Ability to automate deletion of content when it exceeds its defined retention period  
|■ Ability to lock content and metadata, making it immutable when it has reached a given state  
|■ Ability to automate the application of retention policies based on classification, location or metadata state |
| Process automation | Provision of out-of-the-box workflows for content routing and approval  
|■ Ability for authorized users to define (without the need to write code) workflows which automate document routing and the assignment of tasks  
<p>|■ Provision of a task management component to identify and take action on tasks assigned to individual users or groups |
| Open APIs | A REST-based API, available for consumption by customers, that provides access to the majority (&gt;70%) of core product features |
| Security and privacy controls | Ability to apply and maintain granular levels of security, including create read, update, delete and download |</p>
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
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</table>
| Metadata                | ■ Ability to define and apply metadata models for specific content types  
                        ■ Ability to define different types of metadata, including test, numeric, date and boolean data types.  
                        ■ Ability to apply ad hoc metadata tags to content  
                        ■ Ability to enforce different controls on the metadata completion, including look-ups from predefined lists and making certain metadata mandatory |
| Search                  | ■ Ability for end users to perform a full text search for text that might occur anywhere within content stored in the system  
                        ■ Ability for end users to perform a metadata search                                                                                     |
| Collaboration           | ■ Ability to synchronize content with a local device for accessing remotely and while offline  
                        ■ Ability to share content with internal and external recipients from the user interface                                               |
| Enterprise administration| ■ A unified administration console that allows administrators to manage users, groups, roles and general system performance and capability parameters  
                        ■ Ability to integrate with enterprise directory information services for user/group/role/security management (must include general LDAP and active directory support)  
                        ■ Support for single sign-on (SSO)                                                                                                         |
| Reporting               | ■ Ability to define and run reports that describe system usage                                                                                   |
| Mobility                | ■ A mobile client available on both iOS and Android platforms that provides access to basic document management capabilities                       |

Source: Gartner (July 2020)
Recommended by the Authors

Reinventing ECM: Introducing Content Services Platforms and Applications

Magic Quadrant for Cloud Infrastructure as a Service, Worldwide

Magic Quadrant for Content Services Platforms

Office 365 Requires a Content Services Coexistence Strategy to Support Digital Business

Recommended For You

Market Guide for UCaaS Monitoring

Control Content Sprawl With Federations

Market Guide for Content Collaboration Tools

Critical Capabilities for Enterprise Video Content Management

Magic Quadrant for Content Services Platforms

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