

ARCHITECT FOR CLOUD SUCCESS WITH ALFRESCO PAAS

How to do business faster, more securely and at less cost with our fully managed platform-as-a-service environment



Hyland™



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The case for platforms as a service

Enterprises often find that a large portion of their time and IT budgets is devoted to infrastructure and “keeping the lights on.” As a result, not much remains for the projects that are designed to deliver true business value.

While managing “business as usual,” IT organizations are contending with a growing list of challenges, including:

- Legacy systems that are not fit for the purpose of delivering modern content experiences
- An ever-expanding volume and variety of content
- New ways of working that change how and where content is used
- Expectations (or unsanctioned workarounds) for secure content sharing outside the organization
- Growing compliance obligations due to new privacy- and data-related regulations
- Recruiting/retraining staff with the appropriate infrastructure and operations experience
- Escalating management/operational costs

These are just a few of the reasons why so many organizations are moving their content management into the cloud. If you recognize any of them, read on.



Managing content in the cloud
is now business as usual ...

61%

of organizations have completely or significantly evolved their content management due to cloud computing¹

... and the shift to content
platform-as-a-service is accelerating

53%

of organizations are increasing their investment in cloud content platforms¹

Mighty powerful just got mainstream

Given organizations of all sizes and industries have already embraced content management in the cloud, digital business platform as a service (PaaS) is the next logical step.

ADVANTAGES GAINED:

- **Modernization:** Innovate with a modern digital business platform built to work optimally in the cloud; deliver solutions that drive operational excellence and new customer experiences.
- **Reduced TCO:** Save big with elastic compute and low-cost storage resources; eliminate the upfront infrastructure investment and pay only for the capacity you use.
- **Faster time to value:** Implement instantly, avoid provisioning delays and quickly roll out new code using modern DevOps techniques and technologies.
- **More value from content:** Make content available to more people and applications; use machine learning and other cloud artificial intelligence (AI) services to enrich content and make it easier to find and more actionable.
- **Better collaboration:** Support a mobile, distributed workforce that shares and cocreates content with internal and external partners; improve information flow and decision-making.
- **Stronger information governance:** Consistently apply governance policies to ensure compliance with changing government regulations; leverage the security and compliance investments of cloud providers.

Why digital business PaaS?

You can't lift and shift a legacy system that's designed for on-premises deployment and realize all the benefits of managing content, process and governance in the cloud.

Digital business offerings like Hyland's Alfresco PaaS are modern, modular and cloud-native. Their microservices architecture and containerization support let you take full advantage of the cloud's reach, elastic scalability and pay-as-you-grow cost savings.

Plus, you get speed and agility when solving content challenges and can easily integrate innovations such as cloud AI services. The business gains offered by a digital business PaaS extend so far beyond those of traditional ECM systems that Forrester and Gartner renamed the ECM technology category "content services" (or "content services platforms") to reflect this inflection point in the market.

"A cloud foundation provides scale and adaptivity, as well as continuous vendor-delivered innovation."

- Forresterⁱⁱ

Digital business PaaS	Legacy ECM system
Set of modular, lightweight services	Monolithic, heavy-footprint application
Cloud-native	Optimized for on-premises
Open technologies (application programming interfaces [APIs] and standards)	Proprietary technologies
Tailored, user-centric experiences	One-size-fits-all user interface
Easy to integrate and extend	Complex and costly to integrate and extend
Fast time to value	Long development and implementation cycles

Your criteria for selecting a new content services platform

VENDOR'S COMMITMENT TO THE CLOUD

Does the vendor's road map demonstrate a significant and ongoing investment in cloud services? Look for technology partnerships with leading cloud providers as well as product capabilities that leverage the latest cloud services to enhance your applications.

INDUSTRIAL GRADE IN THE CLOUD

Can the vendor provide benchmarks for processing documents at speed and scale on a cloud technology stack? This is especially important for moving high-throughput workloads to the cloud — like claims administration in insurance or mortgage origination in banking.

ACCELERATED CLOUD DEPLOYMENT

Automated deployment options let you put code into production more quickly. Leading vendors kick-start your deployment with a reference architecture that builds in cloud best practices. From there, it's easy to adapt the deployment to your particular use case or development needs.

INTEGRATION WITH CLOUD AI SERVICES

Cloud AI and machine learning services are game-changers when it comes to unlocking and amplifying the value of unstructured content. By integrating text, image or video analytics into your solution, you can extract new insights from content at unprecedented speed and scale.

CAPABILITIES BEYOND CONTENT SERVICES

Look for a platform with integrated process and governance services. This lets you set up seamless information flows that deliver content in context with built-in compliance. One example is placing archive content in cold storage and creating inventories that allow you to identify redundant, obsolete or trivial (ROT) data and dispose of it in a legally defensible manner.

OPEN TECHNOLOGY

IDC calls open technology a “mandatory cloud evaluation criterion.” Adopting a content services platform built on open technologies and open APIs lets you customize, integrate and extend your cloud solutions quickly and cost-effectively. Plus, you can tap into innovations contributed by the open source community.

Why Alfresco PaaS?

Hyland's Alfresco platform provides an open and independent digital business PaaS that's secure, reliable and gives you access to an ever-expanding set of integrated cloud services. Enjoy the freedom to connect, scale and grow your digital business in your own way and on your own terms.

WHAT YOUR BUSINESS DEMANDS, ON DEMAND

- Content, process, governance and AI — all as a service
- Alfresco Digital Workspace requiring minimal configuration
- Cloud-based development platform to build, deploy and run process- and content-intensive apps in a fully managed, hosted environment

FAST, LOW-COST, SECURE

Hosted on Amazon Web Services (AWS), Alfresco PaaS offers an efficient way to increase speed and scale while lowering operational costs.

- **Speed and scale:** 99.9% availability and auto-scale to manage the peaks and troughs of your business while delivering high performance and reliability
- **Lower operational costs:** Combination of AWS compute and storage with the power of the Alfresco Digital Business Platform delivers a cost-effective platform
- **Seamless upgrades:** Automatic upgrades optimally managed, giving you immediate access to the latest Alfresco platform innovations

MEETS DIGITAL TRANSFORMATION PRIORITIES

The Alfresco platform fits three key priorities for organizations that are ambitious for true digital transformation.

Security:

- Fully redundant network infrastructure
- Data isolation in a virtual private cloud
- Encrypted data in transit and at rest
- Numerous security controls, including SOC2 certification
- Strong multiregion disaster recovery and backup options

Architecture:

- Versionless, continuously updated software that prevents lock-in, removing the barriers that limit innovation
- Utilization of the latest cloud technologies, including Amazon machine learning technologies
- Delivery of exceptional user experience with easy customizations

Business value:

- Accelerated time to value
- Expert management — no need to add to headcount
- Scalable to billions of documents

How Alfresco PaaS and AWS enable business success

However you decide to approach your digital transformation, Alfresco PaaS with AWS provides you with the best possible framework for success. Here's a small sample of what you can expect.

AWS service	What you get	The Alfresco PaaS and AWS advantage
Amazon EC2	Elastic compute resources for content services, search indexing, content transformation and process execution	Maximizes application performance and minimizes cost because Alfresco Content Services (ACS) microservices scale independently in response to load. This eliminates the bottlenecks experienced with monolithic ECM systems — for example, when uploading or migrating lots of content.
Amazon S3	Scalable storage resources for frequently accessed content, plus indexes and audit	Allows you to migrate and manage an ever-growing volume of digital content in the cloud. Hyland customers run applications that put the content repository under a lot of stress, and Amazon S3 delivers high-throughput performance at any scale.
Amazon S3 Glacier	Extremely low-cost storage resources for infrequently accessed content	Provides a cost-efficient solution for content archiving, compliance and e-discovery. Automatically move content from standard S3 storage to economical Glacier storage using Alfresco Governance Services or S3 Lifecycle policies.
Amazon Aurora	Cloud-native, MySQL-compatible database to store content metadata and process activity	Enables subsecond access to billions of documents — a must for large-scale, content-intensive use cases. Utilizing Aurora Serverless in places enables keeping the environment as cost-effective as possible.
Amazon AI services	Prebuilt AI services to extend your app with text analytics, image analytics, intelligent optical character recognition and more	Gives you unprecedented opportunities to use content — and the data in it — more effectively. The ability to tag and act on content using AI benefits a multitude of use cases, especially in document-heavy industries.

Example use cases for Alfresco PaaS and AWS AI services

	<u>Amazon Textract</u> Automatically extracts text and data from scanned documents	<u>Amazon Comprehend</u> Uncovers insights and patterns in unstructured data	<u>Amazon Rekognition</u> Identifies objects, people, text and more in images and video
INSURANCE	Claims processing: “Read” claims forms to initiate review and approval workflows and accelerate resolution	Customer satisfaction: Conduct sentiment analysis on customer communications to improve service levels	Underwriting: Analyze and categorize the photographs or videos submitted with an insurance application
FINANCIAL SERVICES	Loan processing: “Read” loan applications to initiate the background and credit checks required for loan approval	Compliance: Flag personally identifiable information (PII) and other sensitive data for redaction	Customer onboarding: Verify the identity of prospective customers for risk analysis and fraud detection
MANUFACTURING	Case management: “Read” case forms to automate document routing and speed decision-making	Legal review/research: Automatically identify specific entities or phrases in large volumes of documents	Product recall: Identify parts/objects in large volumes of digital images or videos

Three keys to success: Talent, time, technology



1. CLOSE THE TALENT GAP

Lack of appropriately skilled, available resources is one of the top challenges organizations face today as they strive to deliver against digital transformation projects. With Alfresco PaaS, you're getting a service that's delivered by a team of server admins and network security specialists with deep skills in Amazon technologies like EC2, S3, KMS and Aurora as well as traditional cloud processes of DevOps and security.

On top of access to unrivalled skill, you get the chance to get your team out of datacenter operations and upgrades and back where they belong — delivering business value.



2. ACCELERATED TIME TO VALUE

Alfresco PaaS is “instant-on,” so there's no waiting for IT to schedule time or for a datacenter to create more space. Your solution is ready to run and will keep on running, however your requirements flex. Additional financial benefits include:

- Reducing the cost of hardware and software support
- Freeing up development time with easily reused content services
- Better disaster recovery than you can achieve on your own
- Avoiding investment in extra infrastructure to handle peak loads

(Based on [AWS Total Cost of Ownership Calculator](#))



Running Alfresco Content Services on AWS **delivers 201% ROI and payback benefits** in less than six months.ⁱⁱ

[Explore more studies](#)

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3. TECHNOLOGY THAT SIMPLY WORKS

Alfresco PaaS is built and run by experts, which means that every interaction is optimized for peak performance. And because it's offered as a managed service, you get to realize additional business benefits without having to hire additional staff:

- The ability to be truly agile in delivering new apps and solutions to employees, partners and customers via instant access to our latest offerings
- Programmatic best practices — whatever your industry, we've got detailed, relevant, up-to-date experience in delivering cloud-native environments that will meet your priorities — whether it's taking care of citizens, delighting customers or adhering to legislation

What's happening under the hood:

- Open APIs, open standards and an open source core simplify integration with line-of-business systems. Prebuilt connectors for AWS services as well as Microsoft Outlook, Salesforce and other popular applications also speed solution delivery.

What your users experience:

- The Alfresco Digital Workspace provides a simple interface for people to interact with their content in the cloud. Users onboard rapidly via a streamlined web experience that includes the most common content-related tasks.
- You can also create fit-for-purpose user experiences quickly and easily. The Alfresco Development Framework lets you extend the digital workspace with hundreds of reusable, responsive UI components as well as your own customizations.

Customer success

FINRA BETS THEIR BUSINESS ON CLOUD

As a government-authorized nonprofit, FINRA has a clear purpose: To protect investors and safeguard market integrity by overseeing U.S. broker dealers in a way that facilitates a vibrant market for all.

To do this, the company has bet its business on the cloud, which includes running the Alfresco platform on AWS. As part of its cloud commitment, FINRA has gone all in, taking a leadership position and urging banks to follow suit. With seven terabytes of new data handled daily and over 500,000 nodes, FINRA is a prime example of how cloud done right acts as an enabler for phenomenal growth.

Using AWS, FINRA performs 500 billion validation checks daily



“We determined that security in AWS is superior to our on-premises datacenter across several dimensions, including patching, encryption, auditing and logging, entitlements and compliance.”

JOHN BRADY

Senior Security Advisor, FINRA

[*Read the full case study*](#)



Added value of digital business PaaS

GET UP AND RUNNING FAST WITH PREPACKAGED SOLUTIONS

Alfresco Content Accelerators are designed to get your business users up and running fast. These out-of-the-box, easy-to-deploy solutions make it easy to get going, increase time to value and let users start putting content to work with secure viewing, annotation, redaction and collaboration on all content and file types, including documents, images, videos, scans, forms and more.

Policy and procedure management: The Alfresco Policy and Procedure Management solution provides an easier, more effective way to search, manage and maintain quality documents and critical change processes, including collaborative activities and approvals — in a secure way.

Claims management: The Alfresco Claims Management Solution helps insurers and any organizations that deal with claims to achieve faster, more efficient claims processing. It extends, not replaces, current claims management platforms with robust content and records management capabilities.

LET USERS WORK AND COLLABORATE WITH THEIR APPLICATIONS OF CHOICE

Connectors and integrations are essential, allowing workers to access and manage content through the major office productivity suites and well-known enterprise applications they use every day — wherever and whenever needed.

Alfresco platform connectors allow access to content from SAP, Salesforce and other enterprise apps from anywhere. Users can even share content with non-Salesforce and non-SAP users in any location, reducing licensing costs. Alfresco platform connectors include:

- SAP
- Office
- AutoCAD
- Salesforce
- Google Docs
- Box
- Outlook
- Google Drive
- And more

Secure desktop sync

Alfresco Desktop Sync allows content to be synchronized between the Alfresco Digital Business PaaS and users' local desktops. It runs on the local desktop and is fully integrated into Windows Explorer and Mac Finder. Users can work offline — documents will sync once they reconnect.

Alfresco Desktop Sync also applies the records management policies associated with the given content — automatically — to ensure that content is appropriately secured, permissioned and governed.

Expected savings

When evaluating whether to continue hosting your own solutions or choosing to leverage the fully managed PaaS environment in the Hyland Cloud, it's important to consider all cost-factors. **The estimated five-year total savings referenced here was calculated based on your specific Hyland solution.** These include:

SOFTWARE EXPENSES:

- Application servers
- Server support
- VMware servers

HARDWARE EXPENSES:

- File servers
- Storage
- VM hosts

HUMAN RESOURCES:

- Upgrades
- Test system refreshes
- Network maintenance
- Security
- Database and storage
- Compliance



Security, privacy and compliance

Putting trusted assets in the cloud requires a foundation of compliance and security measures that should be mission-critical to any vendor you work with. The Alfresco Digital Business PaaS lets you build on a secure global infrastructure that supports security standards and compliance certifications, including NIST Special Publication 800-53, a catalog of security and privacy controls for U.S. Federal Information Systems; SOC 2 Security and Organization Controls as defined by the American Institute of Certified Public Accountants (AICPA); and the European Union GDPR.

Global	Americas	Europe
AICPA SOC 2 OWASP CIS CSA AWS Compliance Programs	NIST 800-53 HIPAA SEC Rule 17a-4(f)	GDPR — supports GDPR, also GDPR-compliant

Planning a successful content migration

Hyland has considerable experience helping customers migrate from an on-premises ECM deployment to Alfresco PaaS. Here are a few lessons learned from our successful migrations. For more detailed guidelines, download the whitepaper, [Migrating Enterprise Content Management to the Cloud](#).

CONTENT CLEANUP

Consider your migration a chance to clean house. Inventory your content to determine what moves to the cloud, what stays behind and why. Ask: “What is the value of this content to the business?” and, “Is it subject to any compliance requirements?” There are a variety of analytical approaches, automated tools and specialist firms to help with this evaluation process. Any ROT data should be disposed of in a legally defensible manner.

CONTENT CONTEXT

Use the information gathered in the content analysis to bring as much value as possible to your cloud applications. Enrich your content with the right metadata (and drop any metadata that’s redundant or unused). This will make files easier to find. You can also use metadata to control content access, move content through a process and automate information governance. Cost and time considerations will determine whether you do this processing before or after content is moved to the cloud.

CONTENT TRANSFER

How much content do you need to move and by when? Streaming data over a high-speed internet connection works for smaller content migrations. For large (petabyte-scale) migrations, your best bet is an appliance like AWS Snowball.

Transferring data on a massive USB stick avoids issues like high network costs, bandwidth constraints, security concerns and long transfer times. You can also do one big upfront transfer using an appliance followed by several smaller online transfers.





Managing content in the cloud is now the preferred option for organizations that want to reduce costs, increase agility and better meet their needs and ambitions as they become truly digital businesses.

When you deploy Alfresco PaaS, you get the full power of our digital business platform, managed as a service by a highly skilled team. With Alfresco PaaS, we're here for you 24/7.

Learn more at [Alfresco.com/PaaS](https://www.alfresco.com/PaaS)

SOURCES

- i. Forrester Research Inc., *Prepare for the Next Business Stress-Test with Content Services*, March 2021.
- ii. Forrester Research, Inc., *Your Future Fit Technology Strategy: Adaptive, Creative, and Resilient*, October 14, 2020.