

INGRES

**UNLOCK CORPORATE DATA, REDUCE
COSTS, AND INCREASE COMPETITIVE
ADVANTAGE WITH OPEN SOURCE ECM
FROM ALFRESCO AND INGRES**



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INTRODUCTION

All sectors and sizes of business today have at least one thing in common: all are impacted by the current content explosion. The sheer volume of content generated by small-, medium-, and enterprise-sized businesses is beyond calculation – and growing everyday. While the internet and Web 2.0 are responsible for much of this information, paper-based processes continue to fuel the explosion as well. In fact, Forrester Research reports that office paper has undergone double-digit growth every year since 1995.

The Paradox of Unstructured Information

Beyond a shadow of a doubt, everything of value that drives business exists as content – from paper-based applications, compliance documents, and signed contracts to digital transaction records, presentations, spreadsheets, emails, and more. The paradox here lies in the fact that all the business content in the world has absolutely no value whatsoever if the people who need it cannot find it, share it, and integrate it into daily workflows and processes. Worse still, this hidden content can actually cost your company thousands of dollars every year. According to an article in *Bank Systems and Technology*, US American workers spend almost 25% of their time searching for files and information. Every misplaced document costs approximately \$125 in expenses and lost productivity. Further, once the document has been located and processed, it is stored in a filing cabinet that costs about \$25,000 to fill and \$2,000 a year to maintain.

ECM: Converting Costly Content into Information Assets

On the other hand, content becomes an extremely valuable asset when it is easy to locate, work with, share, and archive. Enterprise Content Management (ECM) provides the tools and technologies required to manage unstructured information – whether that data is locked in a file cabinet, stored in an isolated data silo, or buried at the bottom of a long email trail. Defined by the Association for Information and Image Management (AIIM) as “...the technologies used to capture, manage, store, preserve, and deliver content and documents related to organizational processes,” ECM helps companies reduce costs, increase efficiencies, and strengthen customer loyalty as well as competitive advantage.



Russell Stalter, publisher of the BetterECM blog, writes that ECM has a role in helping any organization manage and use content – regardless of size or industry. According to Stalter, key benefits of ECM include:

- **Reduced costs through content reuse and repurposing:** Content can be created once, stored in searchable content libraries, published automatically to various mediums, and repurposed to meet a range of communication needs
- **Improved efficiencies:** ECM supports automated content-driven business processes, which helps ensure a single version of the truth across the enterprise, streamlines review-and-comment workflows, and eliminates resource-intensive data re-keying and the costly errors associated with it
- **Reduced risk:** ECM facilitates proof of legal and regulatory compliance through version control, security, and records management features
- **Easy, online access to non-electronic content:** Imaging capabilities simplify the process of integrating paper-based content into digitally-based content repositories
- **Less email churn and bloat:** By using ECM to store, manage, and preserve content, email can, once again, be used for sending messages rather than as a content repository, quasi-collaboration tool, or workflow engine

Further, when an ECM is intuitive to use, it will be eagerly adopted by employees and partners. This helps **enhance collaboration** across the enterprise while ensuring that content is securely managed both inside and outside of the organization.

Even though the benefits of ECM are undeniable, many organizations are missing out because they have had bad or costly experiences with traditional Document Management Systems. Historically developed as large, convoluted software applications rooted in complex document vaults, Document Management systems can be extremely difficult to learn and use; costly to deploy, maintain, and scale; and repellant to end users. In fact, end user adoption rate of these traditional systems is typically around 5%, making it hardly worth the effort or expense to roll out.



ECM Options

In some cases, ECM might be required to support thousands of internal users who interact with millions of documents. In others, ECM is needed to help hundreds of customers or partners who need access to thousands of documents or data points. Depending on your company's unique requirements, you may be considering one of three ECM options available today:

1. Proprietary solutions from traditional market-leading vendors
2. Open source solutions from commercial open source companies or community supported projects
3. Software-as-a-Service (SaaS) solutions developed for targeted applications or content types

While each solution has its merits, this paper will present a proven open source solution from Ingres and Alfresco that provides true business-critical ECM support for a fraction of the cost of traditional vendors' proprietary ECM solutions.

OPEN SOURCE TECHNOLOGY: GROWING ACCEPTANCE ACROSS INDUSTRIES

“Open source” refers to software that is distributed with its source code so it can be modified and freely redistributed by end-user organizations and vendors to meet unique business needs. According to the nonprofit corporation Open Source Initiative (OSI), “The promise of open source is better quality, higher reliability, more flexibility, lower cost, and an end to predatory vendor lock-in.” Red Hat, Ingres, and Alfresco are examples of commercial operations that enable the enterprise to consume open source technologies. With proper support contracts and software updates in the hands of commercial entities, customers are increasingly relying on open source as an alternative to traditional software packaging.

Other benefits of the open source include:

- Zero upfront licensing fees
- Free community support
- Complete visibility into product capabilities, flaws, and roadmap
- Faster, easier customization
- Pay-as-you-go commercial support and training
- Standards-based technologies with no vendor lock-ins
- High level of innovation



Some organizations are reluctant to integrate open source technologies into their IT infrastructures because they fear it represents a sacrifice of functionality, performance, or security. Yet, the Gartner Group predicts that 95% of the G2000 will be using open source software by the end of this year. Further, at the beginning of 2008, Gartner published key predictions for IT organizations and users which included the following:

“By 2012, 80 per cent of all commercial software will include elements of open-source technology. Many open-source technologies are mature, stable and well supported. They provide significant opportunities for vendors and users to lower their total cost of ownership and increase returns on investment. Ignoring this will put companies at a serious competitive disadvantage.”

Already, Gartner reports that almost 50% of open source technology is being used for mission-critical applications.

Open Source versus Commercial Open Source

The benefits of open source development – quicker innovation, faster time to market, better security, greater flexibility, and lower cost – are well documented. But for mission-critical applications, stand-alone open source is simply not reliable enough. Instead, choose open source technology that is supported by a financial viable commercial entity – one with a history of success in mission-critical environments, that provides global 24x7 support services, and that can guarantee technical performance and availability. These key features distinguish a commercial open source company from an open source project. While there are many open source projects, there are relatively few truly open source companies. Alfresco and Ingres are both recognized as commercial open source companies.

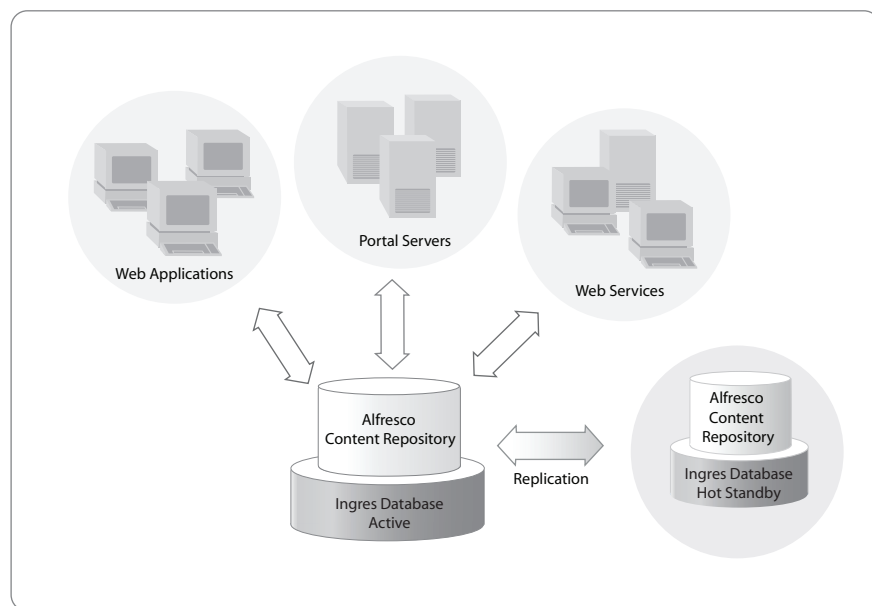


Figure 1. Alfresco and Ingres work together to provide highly available content for globally diverse environments and 24x7 operations.



EFFECTIVE CONTENT MANAGEMENT AND THE BURDEN OF IT

IT is under constant and tremendous pressure to meet and manage expectations regarding content management from business users, customers, and the corporation:

- Business users want collaborative content management solutions that are easy to learn and use, provide accurate information they can trust, and require minimal IT involvement
- Customers want self-service options to information, 24x7 online access to real-time data, and consistent, personalized service available on demand
- The corporation wants content management that improves efficiencies, accelerates growth, supports collaborative efforts, and strengthens competitive advantage – all while reducing costs and mitigating risks

Until a proven ECM solution is deployed across the organization, your IT group is destined to spend a great deal of its stretched resources helping users find and interact with data.

When considering ECM solutions:

- Your organization can choose to go with a single proprietary ECM solution. However, with that choice, you risk getting locked into a single, expensive platform and placing all your information assets – now and in the future – at the mercy of one vendor. Further, if you want to scale or extend a proprietary solution, you typically have to learn its proprietary extensibility framework – which requires deep training and extreme specialization.
- You can choose best-of-breed components from multiple vendors to create your own solution. Then, you risk building a system of disparate technologies that may not scale as you grow, that fail to integrate as component upgrades are released, and that spawn ongoing workarounds across the organization. Also, that it may not be supported as products evolve and vendors no longer support certain components.
- You can choose to do nothing and let business users create their own mini content management systems. Unfortunately, this tends to result in total chaos and ultimately requires even more IT time and attention.
- Or you can choose a flexible, scalable, secure, open source solution that is simple to customize and extend and that provides reliable, easy content access to employees, partners, and customers. You can choose Alfresco or Ingres.



Alfresco on Ingres offers a content management solution that delivers complete enterprise-class capabilities (including performance, reliability, and security) as well as all the cost and flexibility benefits associated with open source technology.

ALFRESCO ON INGRES: ENTERPRISE-STRENGTH CONTENT MANAGEMENT AT AN OPEN SOURCE PRICE POINT

With Alfresco on Ingres as your ECM solution, you can leverage your company's documents, records, and images in a collaborative way with customers and partners – transforming your content into information assets. Ingres is a leading provider of open source database management software. With a mature product that has been proven in thousands of mission-critical installations, Ingres delivers solid performance along with enterprise features. Alfresco – led by John Newton, the co-founder of Documentum – is the leading open source alternative for ECM and features a highly scalable architecture that can support millions of records across thousands of users. Combined, Alfresco on Ingres offers a content management solution that delivers complete enterprise-class capabilities (including performance, reliability, and security) as well as all the cost and flexibility benefits associated with open source technology.

This business-critical solution helps IT meet all the content management requirements of business users, customers, and partners by providing:

- ***A rules-based document repository*** – Whether documents originate as digital content or are scanned in from paper-based forms, Alfresco on Ingres provides a rules-based repository where content can be easily (yet securely) accessed via desktop applications such as Microsoft Office.
- ***Effective search and retrieval*** – Alfresco on Ingres can dramatically increase productivity and reduce time spent searching for information by enabling metadata content searches and automatic metadata extraction.
- ***Seamless repository interfaces based on standards*** – A highly intuitive user interface makes finding, opening, saving, and sharing information as simple as finding or saving files on a shared network drive.
- ***Version control and file check-in/check-out*** – Alfresco on Ingres helps eliminate “multiple versions of the truth” by providing “library services” that automatically store previous versions and ensure that only one person is modifying a file at any given time.
- ***Discussion forums*** – Much more efficient and inclusive than email discussions, forums consolidate project discussions to improve productivity, accelerate content search and retrieval, and provide a single source of historical information on any project.
- ***Workflow functionality*** – Alfresco on Ingres features a good workflow engine that can be configured to automatically send out individualized notifications or alerts when a document needs review, editing, and/or approval. Flexible, yet easy to configure, this solution can accommodate a wide variety of organizational processes.
- ***Records management*** – Whether your organization requires complex records management capabilities to prove legal and regulatory compliance or you simply need basic support for document lifecycle management, Alfresco on Ingres can support your records management requirements.



Mission-Critical Content is Always Available

Your organization cannot afford for your mission-critical content to be unavailable – not even for a few minutes, not even after normal business hours, not even during regularly scheduled maintenance or upgrades. That’s why Alfresco running on Ingres includes native online backup and recovery functionality to protect your company’s information assets and ensure that they are always available. With Ingres, you can take advantage of several features that have been tested in many mission-critical environments, namely hot back-up and online modification of indexes. These features can reliably protect your data from unforeseen disasters while making sure end users can always access data when and where they need it.

Nimble, High-Performance, and Good to Grow

Alfresco on Ingres is built to be high-performance, scalable, and nimble enough to integrate new departmental workloads, mission-critical processes, and application upgrades without the expense and complexities associated with traditional ECM solutions.

Alfresco on Ingres has several features to enable small- or large-scale customer environments. These performance and scalability features include clustering, replication, and an overall Service-Oriented Architecture (SOA) platform to distribute services across various systems. Additionally, because Alfresco runs in a Java environment, customers have a choice of operating systems on which to deploy.

Alfresco uses a combination of services to enable proper clustering across different systems. Utilizing SOA and caching mechanisms, Alfresco’s loads can be balanced and shared across several machines while maintaining version consistency. This allows increased loads to be easily accommodated while ensuring that a single, current version of the truth is accessed by all end users.

Another element to performance and availability is replication of data across multiple databases. In addition to replication support, indexes must also be synchronized to coordinate and reduce disruption to your system as users or regional access increases. Alfresco uses the Ingres replication facility to copy metadata from one repository to another. Because Ingres supports bi-directional replication, each database can serve as an up-to-date repository for Alfresco. This service greatly helps distributed sites as well as for customers who require highly available content.

Rock-Solid Security

Whether your organization’s competitive advantage depends on its intellectual property or you simply need to protect the confidentiality of your customer’s information, you need to ensure a secure information infrastructure – while enabling collaboration and content exchange within and outside of your organization’s firewall. Alfresco on Ingres includes robust security features (including user roles, document-level security, and single sign-on through NTLM or LDAP) to prevent unauthorized individuals from accessing or altering confidential and proprietary information.



With Ingres, administrative control of the meta repository can be securely managed as well. A repository system capable of delineating roles for administration ensures compliance with security best practices commonly found in regulated environments. Additionally, by utilizing operating system best practices and data encryption, you can maintain the authenticity, integrity and confidentiality of digital content.

24X7 Global Support

When you choose Alfresco on Ingres as your ECM solution, you can rest assured knowing that you can have 24x7 technical assistance and direct access to product service engineers. We provide true multi-channel support so you can choose the type of support that is most appropriate to your environment or challenge. Through the Ingres Service Network, your organization can receive personalized and proactive service that is organized around your company, the systems you manage, and the way you utilize technology services.

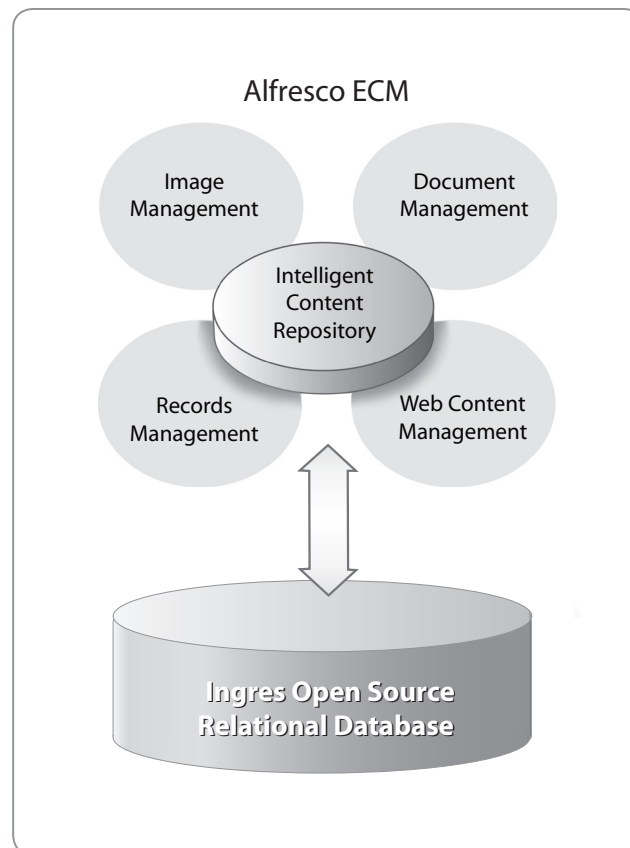


Figure 2. This enterprise-strength, open source solution provides a rules-based content repository and seamless, standards-based repository interfaces to ensure that mission-critical content is available and accessible.



BENEFITS OF ALFRESCO ON INGRES

Easily customized and scaled to meet your organizations' unique requirements, Alfresco on Ingres can help your company:

- Extend the value and lower the TCO of your information assets
- Facilitate collaboration and communication
- Protect the authenticity, integrity, and confidentiality of your content
- Reduce time spent searching for information
- Accelerate response times and improve customer satisfaction
- Reduce operational costs by increasing efficiencies
- Increase the accuracy and reliability of your compliance reports

CONCLUSION

Improve your content management, facilitate streamlined collaboration, and boost your profitability with low-cost Alfresco on Ingres ECM. Built on a secure and flexible architecture, this solution helps your organization unlock corporate data, achieve peak efficiencies, reduce costs, and increase competitive advantage.



About Ingres Corporation

Ingres Corporation is a leading provider of open source database management software and support services. Ingres powers customer success with the flexibility, cost savings, and innovation that are hallmarks of an open source deployment. Ingres supports its customers with a vibrant community and world class support, globally. Based in Redwood City, California, Ingres has major development, sales, and support centers throughout the world, and more than 10,000 customers in the United States and internationally. For more information, visit www.ingres.com.

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