

# Enterprise Content Management on Cloud

T Arulmozhi, N Saranya

**Abstract**— At present, the attention of many organizations concentrates on the Enterprise Content Management System (ECM). Unstructured content grows exponentially, and Enterprise Content Management System help to capture, store, manage and integrate and deliver all forms of content across the company. Today, decision makers have possibility to move ECM system to cloud and take advantages of cloud computing. Cloud solution can provide crucial advantage. It can reduce fixed IT department cost and ensure faster ECM implementation. ECM is dynamic mix of technologies adding multifarious business need by disruptive technologies such as social, mobile, cloud and analytics. ECM mostly designed for government, corporations and media publisher etc. To streamline the workflow when enhancing the online experiences of user product increased productivity. ECM enables to systematically manage our content and makes it simple to find, govern, use and share while connecting it to organizations processes. Enhance the collaboration and increase compliance with workspaces that enable team member to work together efficiently..

**Keywords**— Multifarious business needs, Web Content Management.

## I. INTRODUCTION

For many organizations, the challenges of surviving global market often seem overwhelming. One of most time-consuming and costly tasks a company faces in dynamic business environment is translating all its web and print documents. Large volume of business documents are created and managed using manual steps in an organization. In recent times it generates information with rapid rate and information could be formatted and stored for future purposes. The data in organizations are unstructured and not appropriately formatted so it could be easily accessed when needed.

ECM is to ensure various information places and effectively integrated with the required technology. The rate at which information is generated, transmitted and utilized in an organizations have to device a way to manage information in order to be readily available to customers, they can use when it needed. Integrated content management is manifested in such a way that organizational issues such as cost decrease, automated process, reduction of resources to share content effectively, minimizing the number of lost documents and risks management is controlled.

T Arulmozhi is Post Graduate Student (M.E) in Department of Computer Science and Engineering at Sri Shakthi Institute of Engineering and Technology, Coimbatore, Tamilnadu, India.

N Saranya is Assistance Professor in Department of Computer Science and Engineering at Sri Shakthi Institute of Engineering and Technology, Coimbatore, Tamilnadu, India.

## II. USE OF ECM

In Large business, information is created, shared, edited and stored at a fast pace. With this heavy flow of content, it is easy for documents to become lost, deleted, changed or distributed without proper approval. An enterprise content management system manages all company's content in one central location, making it easy to share, store, protect and control important information. With an enterprise CMS, can convert physical content into digital content. Most enterprise CMS solutions label documents using keywords and more easily to find the company content. Using full text-search capabilities, and easily find documents.

## III. ENTERPRISE CONTENT MANAGEMENT LOOKS

### A. Management Collaboration

The primary purpose of an ECM is to manage company's documents. The best solutions provide metadata management options, allowing finding documents by searching keywords instead of sorting. Select full-text search capabilities, is used to search entire documents.

### B. Document Tools and Integration

Document management give you full access to company's documents, allowing to view and make any necessary changes to files. Version control options allow to access most recent version of document as well as view any previous versions of file. Document management solutions allow collaborating with other employees, editing documents asynchronously.

### C. Security and Compliance

Security is critical when working with confidential information, the best systems let them to set permissions on who can or cannot access documents, also allowing specific employees to check documents in and out of the system. Additionally, the most capable enterprise CMS solutions offer auditing options. This allows you to see all recent activity to documents. With auditing options, can also track who shares documents to whom.

Enterprise Resource Planning (ERP) systems and other Information Systems are unable to exchange workflow information easily resulting in a lot of unstructured data being re-keyed manually elading to errors, inaccuracies and duplications.

Record Management (RM) is management responsible for efficient and systematic control of creation, receipt, maintenance, and dispose of records including the processes for capturing and maintaining business activities and transactions in forms of records.

ECM Objective is to combine the functionalities of web content and content management and systematically incorporate. Organizations are adopting ECM as strategic investment with an intension of improving business activities.

Enterprise Content Management makes creating, editing and sharing content on simple process. Strong security to ensure any confidential information is not too accessed and provides easy access. BPM provides platform to provide controller on options.

IV. IMPLEMENTATION



Fig: 1. Architecture Diagram

Implementation is most crucial stage in achieving a success and giving confident to new user. ECM solution and assure an efficient usability. ECM systems are tightly bounded with company's business processes. It is not enough to cover cultural change issues in implementation plans; cultural transformation must be actively and effectively management by service provider.

A. Open Stack Used in Cloud Environment

Cloud is providing computing for end users in a remote environment, where the actual software runs as a service on reliable and scalable servers rather than on each end users computer. Cloud computing can refer to lot of different things, but typically the industries running about different items "as a service"—software, platforms, and infrastructure. Infrastructure means that Open Stack makes it easy for users to quickly add new instance, upon which other cloud components can run. The infrastructure then runs a "platform"

upon which a developer can create software applications and delivered to the end users.

B. PaaS- Cloud Foundry

Cloud Foundry is an open source platform as a service (PaaS), providing a choice of clouds, developer frameworks and application services. Cloud Foundry makes it faster and easier to build, test, deploy and scale applications. Today's enterprises are looking to add PaaS capabilities to their private and public cloud infrastructure to decrease time to market for their applications and increase their developer productivity.

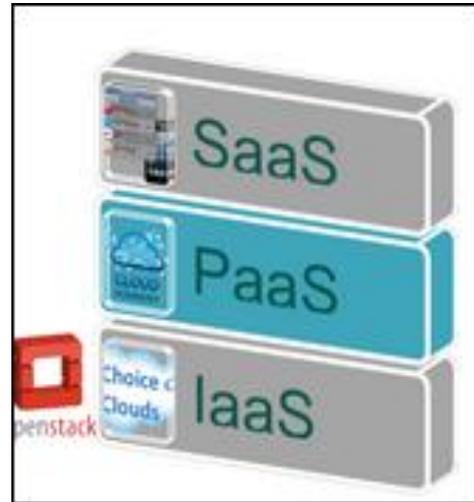


Fig:2. PaaS Services

Cloud Foundry is a cluster of VMs/Services working together inside of OpenStack tenant. Multiprogramming language and services supported. Language runtimes like Java, PHP, Ruby, Node.js and Perl. Attached non OpenStack services such as Mysql, PostGre, Rabbitmq, Redis, Mem cache.

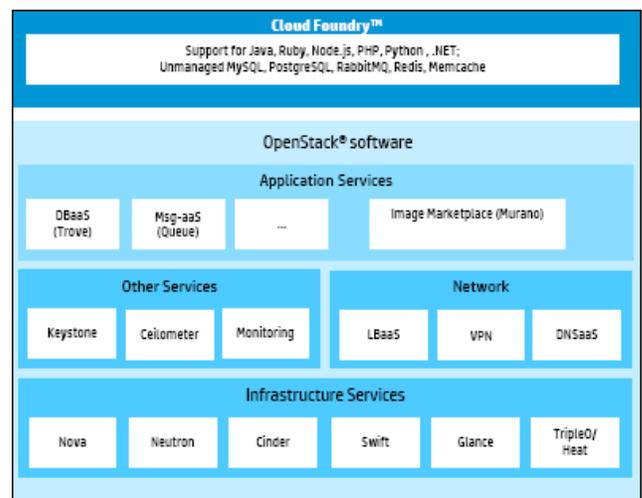


Fig:3. Integrating IaaS and PaaS

Cloud Foundry clearly defines and provides a PaaS that will run very well on any OpenStack deployment. Stackato has shown that Cloud Foundry will also work equally well on any

infrastructure such as Amazon EC2, Cloud Stack, vSphere or KVM. Enables developers to quickly develop, deploy and control applications. Focus on code not managing the infrastructure; eliminate need for developers to be experts in diverse technologies. Instant provisioning and deployment on applications.

#### C. Portal Server

Liferay portal ships with broad capabilities to provide immediate return on investment (ROI).

1. Content and Document Management
2. Web publishing and shared workspaces.
3. Enterprise Collaboration.
4. Social Networking and Mashups.
5. Enterprise Portals and Identity Management.

#### D. Cloud Controller

Cloud controller is responsible for managing the lifecycle of applications. When a developer push an application to cloud foundry, that targeting the cloud controller. The cloud controller then stores the raw application bits, creates a record to track the application. The cloud controller maintains records of orgs, spaces, services, service instances, users' role and more. Database services: are deployed outside Cloud Foundry, plan infrastructure with high availability.

#### E. Authentication and Authorization

OAuth2 provider, the UAA issues tokens for client applications to use when they act on behalf of Cloud Foundry users. The UAA can also authenticate users with their Cloud Foundry credentials, and can act as an SSO services. Applications can bind to services such as databases, messaging, and key-value stores.. An application can only bind to a service that has an existing instance in the target application space.

#### F. Content Management - Alfresco

Alfresco's open source technology enables global organizations to collaborate more effectively across cloud, mobile, hybrid and on-premise environments. The intersection of content, collaboration and business process, alfresco manages over documents. Improve business process, eliminate information silos and experience smarter enterprise content management.

Alfresco enables applications to be quickly built, deployed and modified by avoiding vendor lock-in to choice opportunity to existing technologies with platform to deliver a complete ECM solution. Open and modern BPM platform allows flexibility for automating, customizing and rapidly adapting business processes. Support for on-premise and in the cloud options ensures flexibility of process deployment and execution

Alfresco is not yet a full Web Content Management like Joomla or Drupal, but a ECM. Alfresco is a general purpose content repository with content management services. It can manage all business documents and transform them in web-ready formats and categorize them linking into overall site and index pages.

Build a new ECM approach with perfect combination of on-premise, cloud and mobile capabilities and also hybrid ECM. Alfresco platform can implement **business rules or document processing** with scripts. This ability makes alfresco fit in any business process. The ability of flexible rule creation and automation stream lines a major person of business process management for business document and content.

#### G. Phone Gap

Phone Gap is a mobile development framework; it enables software programmers to build applications for mobile devices using JavaScript, HTML5 and CSS3, instead of relying on platform-specific APIs like iOS, Windows Phone, or Android. It extends the feature of HTML and JavaScript code depending upon platform devices.

#### H. Phone Gap Application Used

Phone Gap applications can have static UI based on normal HTML or can have dynamic and interactive experiences developing using JavaScript. The app have their own icons and operates similarly to native application stores, such as Android Market and Apple App Store, and they have to access to a set of native functions.

#### I. Integrating Liferay with Alfresco

Enterprise content management systems and enterprise portals naturally complement each other. When combined, numerous business challenges can be solved remarkably better than using just one or the other. An integrated solution can dramatically augment enterprise collaboration, and boost employee productivity.

Alfresco Web Script portlet can be used to expose remote web scripts used for user authentication. Alfresco is an Enterprise Content Management Software which also has an equally powerful & vigorous community supporting it and an imposing set of customers using the software.

Two technologies seems to be very much complementary to each other – Liferay providing the portal environment while Alfresco sits at the lower level of the stack supplying the content management services.

Alfresco Web Script is a very great framework which makes this solution even more feasible and extensible. Web Scripts can be used as a platform of SOA architecture based solution as well as these can be used as standard JSR portlets deployed in Liferay. Both these technologies support Single Sign and LDAP.

## V. CONCLUSION

As organizations struggle to manage an ever-growing volume of unstructured business data, they need to develop a strategy for effective content management applications across the enterprise. A Cloud ECM platform makes it possible for companies to overcome the high development and maintenance costs, administrative complexity, and barriers to adoption of traditional, deployed ECM software solutions. The emergence of cloud platforms as secure, stable, enterprise class solution providers mean that organizations can now

deploy multiple ECM applications cost-effectively throughout the enterprise without adding new hardware, software resources. ECM component—document management, records management, Web content management, and forms management. Organization provides with an overall solution that addresses a number of use cases and reducing time it takes for return on investment. While ECM may seem like a daunting task at first glance, organizations offer ECM. It becomes integral business processes and a valuable contributor to business success.

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