Optimizing and Content Management System Using Indexing

Manisha Verma[1], Rajesh Singh[2], Prabhat Kumar[3]

M.Tech (Scholar), CSE Department, BSACET, Mathura, India[1]

Assistant Professor, CSE Department, BSACET, Mathura, India[2]

M.Tech (CSE), Shobhit University, Meerut, India[3]

Abstract: The core function and use of content management systems is to present information on websites. CMS features vary widely from system to system. Simple systems showcase a handful of features, while other releases notably enterprise systems offer more complex and powerful functions. Most CMS include Web-based publishing, format Management, revision control (version control), indexing, searching and information retrieval. An additional feature is indexing, search, and retrieval. A CMS system indexes all data within an organization. Individuals can then search for data using keywords, which the CMS system retrieves. A CMS system also provides tools for one-to-one marketing that provides an ability to a website to tailor its content and advertising to a user's specific characteristics using information provided by the user or gathered by the site (for example, a particular user's page sequence pattern).The CMS increments the version number when new updates are added to an already-existing file. A CMS may serve as a central repository containing documents, movies, pictures, phone numbers, and scientific data. CMS can be used for storing, controlling, revising, semantically enriching and publishing documentation

Keywords: Content Management System, File Transfer Protocol, version control, HTML, Portable Document Format, Database, Web Content Management System, Web pages.

I. INTRODUCTION

Content Management Systems are a relatively new development in the web design world. As of now, it looks like the use of a CMS will become standard for the majority of online businesses. Prior to the implementation of CMS's, any change that needed to be done to a website was a lengthy process. Even if it was ONE line being altered, the developer would have to do it himself, and it took some time. A CMS offers a variety of benefits. The use of CMS gives non-technical users complete control over their website content. Content updates are of immense importance for search engine rankings. Before CMS, maintenance of a website was a frustrating task for businesses, as it required having a technical person with sound knowledge of HTML and programming to look after the updates. CMS has eased this process by empowering the non-technical users CMS reduces the maintenance costs of websites for businesses. Owner of a website is in full control of themes, content, and display panel's settings and can easily make amendments to them. There is no need of hiring a designer or developer for these amendments. This reduces the maintenance cost to zero and gives the flexibility to make changes at any desirable time. CMS allows only a consistent layout for information like navigations, headers, footers, and Meta tags etc. Inconsistent design may ruin your website. Basically, it minimizes the risk of errors. Enterprise content Management system (ECM) [9] organizes documents, content and records related to the processes of a commercial organization multiple authors can work on the .Content of your website simultaneously with the help of CMS. You can then schedule updates existing in drafts to be published on a particular date. CMS also helps to create search engine friendly pages. It segregates design and content, allowing web master to add keywords in the URL of pages. In modern CMS there is a facility of even Predicting suggestions for relevant Meta titles and Meta description for every web page.

II. CONTENT MANAGEMENT SYSTEM AND ARCHTITECTURE

A CMS allows you to write it once and have the work out how to include that content whenever it is needed, Instead of creating and saving the same information continually throughout your website. For example, if the top of every page is going to feature the same business logo, menu items and contact details, you shouldn't need to repeat this information in each page file; a CMS displays web pages by selecting the relevant elements and piecing them together in the right configuration. Each page file would contain an instruction to include this information in the right spot and instead, the information that forms this part of the page would be stored in a single, separate file. A Web content management system [8] is a bundled or stand-alone application to create, manage, store and deploy content on web pages. A CMS allows you to create and control these pieces, invisibly converting your words and images into code and storing them in the database. It is to allow visitors to leave comments or reviews, one way of building useful content while also engaging with customers. It instantly have their input included within the relevant pages, a CMS allows you to include forms and features that enable users to enter their own words - or even images, video or other content.

Various Content Management governance structures
Localized Governance: Localized governance models empower and unleash creativity, by putting control in the hands of those closest to the content, the context experts.

However, these benefits come at the cost of a partial-to-total loss of managerial control and oversight.

Centralized Governance: When content management systems are capable of delivering an exceptionally clear and unified brand message, the levers of control are strongly centralized. For example, the avoidance of duplicated efforts in creating, editing, formatting, repurposing and archiving content, through process management and the streamlining of all content related labour, and through an orderly deployment or updating of the content management system, Moreover, centralized content management governance structures allow for a large number of cost- savings opportunities in large enterprises, realized.

Federated governance models potentially realize the benefits of both localized and centralized control, while avoiding the weaknesses of both. While content management software systems are inherently structured to enable federated governance models, realizing these benefits can be difficult because it requires, for example, negotiating the boundaries of control with local managers and content creators. In the case of larger enterprises, in particular, the failure to fully implement or realize a federated governance structure equates to a failure to realize the full return-on-investment and cost-savings that content management systems enable.

III.   RELATED WORK

Many researchers has already been worked to optimize the current architecture of content management system, A content management system is a substitute of [11] file transfer protocol that provides numerous facilities like compression, encryption, decryption and security etc. Another proposes includes authentication which uses SFTP (SSH File Transfer Protocol) that was a new implementation in File Transfer protocol.

In Grid environments, access to distributed data is typically as important as access to distributed computational resources[11].Distributed scientific and engineering applications require transfers of large amounts of data (terabytes or petabytes) between storage systems, and access to large amounts of data (gigabytes or terabytes) by many geographically distributed applications and users for analysis, visualization, etc. Unfortunately, the lack of standard protocols for transfer and access of data in the Grid has led to a fragmented Grid storage community. Users who wish to access different storage systems are forced to use multiple protocols and/or APIs, and it is difficult to efficiently transfer data between these different storage systems. In the Most available FTP implementations support only a subset of the features defined in the FTP protocol and its known latest versions. Some of the rarely implementation, Particularly, when distributed teams of users are responsible for coordinating and contributing to different content repositories. A CMS provides many advantages over traditional methods.

❖   A CMS significantly lowers costs associated with managing information online. The "webmaster bottleneck" is removed and manual technical steps in the process are eliminated. You don't need to complete many operations to get the entire file or files transferred; one of the biggest advantages of file transfer protocol is that it is one of the fastest ways to get large files from one computer to another. FTP allows you to transfer files back and forth. If you can send information to your employees and they can send information back all on the same server, this means that you are an owner of a company. It can be essentially unlimited. A user can deliver and receive an unlimited number of files through the FTP setup at no extra cost in terms of webhosting. Movies, documents and presentations can all easily be sent or stored using an FTP. Some providers even offer to encrypt and protect the data to make sure that only those authorized can access it.
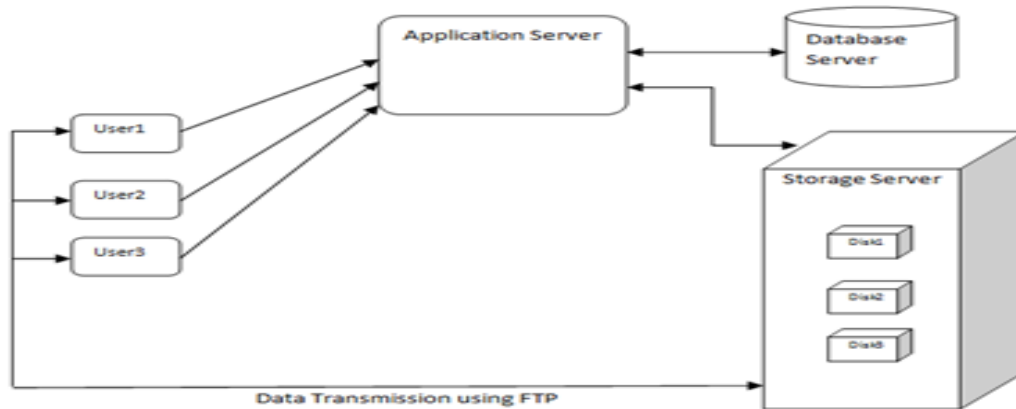
IV.   PROPOSED WORK

We have used standard structure as such that a unique code is generated by database to store data in file systems on it. Files are stored as per hierarchy defined and is checked for redundancy before uploading. It also helps us in tracking development cycle of content and phases, phases are as below:

Users associated with respective phases will be able to view, edit and commit data belonging to these phases. On demand / requests it backups the required heavy content, it further helps in further fine tuning the data size which is supposed to be uploaded. Below diagram illustrates the data flow within proposed Windows based CMS figure (1):

❖   Scripting
❖   Development of content
❖   Testing and auditing of content

Application server in turn interacts with database and storage server, application server forwards application Users request to database for retrieval of desired content, database server responds to query triggered by user with results, this is how triggered query is fulfilled by the application, and therefore a unique id is assigned virtually to each transferred entity which make searching faster when user want to retrieve that from the huge database. This would be hidden from the user to maintain the security. Each entity would be Striped data transfer, Partial file transfer of data transfer, Parallel data transfer, Grid Security Infrastructure (GSI) and Kerberos support, when it comes to transmitting files over the Internet, there are many advantages of file transfer protocol (FTP). the existing FTP standards and further extended them, adding the features described below also has some drawback, a subset has been -considered of depending on your requirements, you need transferred across networks locally or nationally features are useful to grid application, but the standard Third-party control , FTP may be the perfect medium for the types of large files. Databases can store large amounts of data. Usually, each stored entity is a complex structure, called a record (similar to a feature structure). Records are indexed based on the values of certain fields (features). The retrieval is usually not limited to a query where specific values are requested for a field, but must support other types of queries (such as interval

queries - where the values should belong to a given interval).

Roles and Responsibilities

Creator	Responsible for creating and editing content.
Editor	Responsible for tuning the content message and the style of delivery, including translation and localization.
Publisher	Responsible for releasing the content for use.
Administrator	Responsible for managing access permissions to folders and files, usually accomplished by assigning access rights to user groups or roles. Administrator may also assist and support users in various ways.
Consumer, viewer or guest	The person who reads or otherwise takes in content after it is published or shared.

V. IMPLEMENTATION AND RESULTS

❖ Implementation includes establishing a secure FTP connection to a storage server where data will reside.
❖ Database configuration entry related to various FTP location and its physical location on storage server were done while implementing this tool, this in turn helped in identifying the served on which data got uploaded
❖ Web services were deployed which provides user interaction capability which in turn helps in downloading the content from server.

A CMS developed support the following features-
1) Import and creation of documents and multimedia material.
2) Identification of all key users and their roles.
3) The ability to assign roles and responsibilities to different instances of content categories or types.
4) Definition of workflow tasks often couples with messaging so that the content managers are altered to changes in content.
5) The ability to track and manage multiple versions of a single instance of content.
6) The ability to publish the content to a repository to support access to the content.

	With CMS	Without CMS
Creating new page	Creating new page which is based on a Pre-defined default. All routing connections are automatically simplified and a full inspection trail is available.	Creating new page as a copy of an existing one. Context routing contacts and the site map must be restructured by hand and standards imposed in an ad-hoc manner.
Content reliability	Patterns are separated from page content, severely maintaining reliability during the site. Demonstrate reliability is imposed by the CMS.	Pattern and Content are inextricably attached together, creating it difficult to update changes site-wide. Demonstrate reliability is determined by the developers.
Workflow Procedure	Workflows are made to mirror designated business processes. The Content Management System workflow mechanism records an inspection with explanation on each one step.	In general, Workflow is done by email in an ad-hoc fashion. Electronic message are mailed to different persons in the organization and ahead following approvals, manually published online.
Period of publishing	Generally. Content is published instantaneously once compulsory approvals have been made.	Generally. when the webmaster has available time, then Content is published, which could take a number of days and acquire reconfiguration errors.

VI.   CONCLUSION AND FUTURE SCOPE

In our proposed CMS content would directly be uploaded to storage server using File Transmission protocol. A user can deliver and receive an unlimited number of files through the FTP setup at no extra cost in terms of webhosting. Movies, documents and presentations can all easily be sent or stored using an FTP. Our application basically focuses on content management using FTP which is faster mode of uploading and downloading data over internal network i.e. LAN in a secure manner. This solution could easily be extended to extranet or World Wide Web securely based on requirement. Therefore, we may say that proposed solution is robust and flexible which is must for any application that supports innovation. Since this application is robust and platform independent hence there is always a scope of improvement in existing environment.

REFERENCES

[1]   S. M. Metev and V. P. Veiko, Laser Assisted Microtechnology, 2nd ed., R. M. Osgood, Jr., Ed. Berlin, Germany: Springer-Verlag, 1998.

[2]   J. Breckling, Ed., The Analysis of Directional Time Series: Applications   to Wind Speed and Direction, ser. Lecture Notes in Statistics. Berlin, Germany: Springer, 1989, vol. 61.

[3]   S. Zhang, C. Zhu, J. K. O. Sin, and P. K. T. Mok, "A novel ultrathin elevated channel low-temperature poly-Si TFT," IEEE Electron Device Lett., vol. 20, pp. 569–571, Nov. 1999.

[4]   M. Wegmuller, J. P. von der Weid, P. Oberson, and N. Gisin, "High resolution fiber distributed measurements with coherent OFDR," in Proc. ECOC'00, 2000, paper 11.3.4, p. 109.

[5]   R. E. Sorace, V. S. Reinhardt, and S. A. Vaughn, "High-speed digital-to-RF converter," U.S. Patent 5 668 842, Sept. 16, 1997.

[6]   (2002)The IEEE website. [Online]. Available: http://www.ieee.org/

[7]   M. Shell. (2002) IEEEtran homepage on CTAN. [Online]. Available:http://www.ctan.org/texarchive/macros/latex/contrib/supported/IEEEtran/FLEXChip Signal Processor (MC68175/D), Motorola, 1996.

[8]   "PDCA12-70 data sheet," Opto Speed SA, Mezzovico, Switzerland. Karnik, "Performance of TCP congestion control with rate feedback: TCP/ABR and rate adaptive TCP/IP," M. Eng. thesis, Indian Institute of Science, Bangalore, India, Jan. 1999.

[9]   J. Padhye, V. Firoiu, and D. Towsley, "A stochastic model of TCP Reno congestion avoidance and control," Univ. of Massachusetts, Amherst, MA, CMPSCI Tech. Rep. 99-02, 1999.

[10] Wireless LAN Medium Access Control (MAC) and   Physical Layer (PHY) Specification, IEEE Std. 802.11, 1997.

[11] Chervenak, I. Foster, C. Kesselman, C. Salisbury, S.Tuecke, "The Data Grid: Towards an Architecture for the Distributed Management and Analysis of Large Scientific Datasets," to be published in the Journal of Network and Computer Applications

[12] 'William Allcock, Ian Foster, and Steven Tuecke,Ann Chervenak and Carl Kesselman',Protocols and Services for Distributed Data-Intensive Science,www.globusproject.org