

The Library Automation through the Cloud Computing server: Based on Digital Ocean Cloud server

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Abstract

The purpose of this study is to present a model for library automation through the use of the Digital Ocean Cloud Server System (DOCSS) cloud computing. Now a day's Technology is growing fast Cloud computing is a new technology model for IT services which many businesses and institutes are adopting. It avoids locally hosting multiple servers and equipment and constantly dealing with hardware failures, software installations, up gradations and compatibility problems. For many organizations, cloud computing can simplify processes and we can save time and money by using cloud. This article focuses on the process of automating libraries using cloud computing servers. A physical server costs a lot of money for equipment and maintenance services. This method can be easily used for libraries with limited funds and minimal facilities. This cloud server is an easy way to get the most out of library automation for a small fee, and this module formally discusses current usage.

Keyword: Library Automation, Cloud computing Server

Introduction

Cloud computing is a new IT service delivery strategy that many businesses and consumers are adopting. Cloud computing has the potential to change the way systems are constructed and services are delivered, allowing libraries to expand their reach. Cloud computing is internet-based computing in which users pay for software, infrastructure, platform devices, and other resources and hosting on an earn basis via virtual shared servers. In the cloud computing concept, all of the information that a digitized system has to provide is given as a service. Users can use the services on the "Internet Cloud" without any previous knowledge of how to manage the resources involved. Cloud computing is defined by the Gartner Group as "a type of computing in which massively scalable and elastic IT-enabled capabilities are offered as a service to external clients via Internet technologies. "Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources, networks, servers, storage, applications, and services} that can be rapidly provisioned and released with minimal management effort or service provider interaction" National Institute of Standards and Technology {NIST,2018}.

Cloud computing allows you to isolate the process of constructing a service provisioning infrastructure from the library of end-user services. People can use cloud computing to share dispersed resources and services from multiple companies or places. Cloud computing uses a network to share dispersed resources in an open environment. It is an internet-based virtual pool of computing resources. People can use cloud computing to share dispersed resources and services from multiple companies or places. Many businesses, such as Amazon, Google, and Microsoft, are speeding up their development of Cloud Computing systems and upgrading their services in order to accommodate a bigger number of customers. The three components of cloud computing

are "application," "storage," and "connectivity." Each sector has a distinct function and offers a variety of products to organizations and individuals all around the world. Computers are used by libraries to run services such as Integrated Library Management Software (LMS), Automation, websites, portals, digital libraries, and institutional repositories, among other things. These are either maintained by the computer staff of the parent organization or by the library staff. It necessitates an investment in infrastructure, software, and personnel to maintain these services, as well as backup and update when new software versions are released. Without the assistance of IT employees from inside or outside the company, library professionals who are not educated in server maintenance find it impossible to do some of these tasks. Now that cloud computing has become a new term in the library world, it's a gift in disguise since it allows libraries to offer various ICT services without much difficulty because third- party services will maintain servers, do upgrades, and backup data.

Objectives

This article explores presenting a model for automating libraries through cloud computing services. It will look at how library automation works through this cloud computing method and how it is used, further explores the importance of that method of cloud computing system use to the library field today.

Methodology

In this study, Library Automation outlines the main requirements of the digital ocean cloud Server use of creation process and its application. There are basic requirements for automating the library through cloud computing. This requires an internet connection, a minimal budget, and trained human resources, as well as a Google account and a digital ocean cloud server account. The above factors are required to access an account on the Digital Ocean Cloud Server. The installation of the Linux version of the operating system took place after selecting the desired image before installing the Koha automation software. It was selected by the Debian operating system. But there are several Linux operating systems on this server for this purpose and we can choose the operating system we want. This methodology does not include the complex steps required to install the operating system. An appropriate plan was then selected to build a virtual machine on the digital ocean cloud transport server for library automation for library needs. This virtual machine was built on AMD CPU, NVME SSDS, and data transfer components in the face of existing financial provisions, and the Koha software was installed on the computer. It purchased the domain name for publication, added it to the Koha URL, customized it, and published it. Finally, the Koha automation software is designed to be easily used by the library staff and is usually published as a user interface.

\$6/mo \$0.009/hour	\$12/mo \$0.018/hour	\$18/mo \$0.027/hour	\$24/mo \$0.036/hour	\$48/mo \$0.071/hour	\$96/mo \$0.143/hour
1 GB / 1 AMD CPU 25 GB NVMe SSDs 1000 GB transfer	2 GB / 1 AMD CPU 50 GB NVMe SSDs 2 TB transfer	2 GB / 2 AMD CPUs 60 GB NVMe SSDs 3 TB transfer	4 GB / 2 AMD CPUs 80 GB NVMe SSDs 4 TB transfer	8 GB / 4 AMD CPUs 160 GB NVMe SSDs 5 TB transfer	16 GB / 8 AMD CPUs 320 GB NVMe SSDs 6 TB transfer

Figure 1: Price of Virtual Machine with their Component

Results and Discussion

In the case of cloud computer - based automation for libraries, it's useful to create and publish software at low cost, and to operate without a physical server. Although libraries do not have physical servers, any library can do this at minimal cost. In this automation the bulk of the cost of the library is spent on the physical purchase of servers. Thus, any library can use this cloud computing based automation system to minimize cost impacts through this system. Library staff can save their time, easily to maintain, easily save on automation and expensive cost of physical servers. This makes it easier for library staff to understand and maintain the system.

Conclusion and Recommendations

This Cloud computing system base library automation system can be used not only for library automation, but also to create attractive websites for libraries, digital library creation and to promote library functions and services. One of the main advantages of this process is that you do not have to spend a lot of money on a physical server. Here's how to put one together for use with your computer. Five cloud computing systems in each library division can be used to create quality library services, even in libraries with minimal facilities for automation and other functions. Therefore, the authorities should pay attention to the use of such IT strategies by the relevant stakeholders in libraries.

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