Chapter 12
Managing Risk in the Cloud for Digital Preservation

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ABSTRACT

Digital preservation is the consistent archiving of electronic assets for entry and re-use, regardless of the system and computer software options. The introduction of cloud technologies provides a stylish alternative, although preservation systems possess a solid focus on grids. Electronic preservation has turned cloud computing into the primary demand. Cloud services' use continues to rise, however many do not know how several and which cloud services is or not authorized and how they are really in use across their businesses. This kind of incomplete image of the Cloud Services in an organization prevent its capacity to satisfactorily address the hazards related to cloud solutions, including information protection, consumer privacy, dependability of essential business processes, and compliance hazards. Tycoons' involvement is necessary to shift businesses toward better cloud support knowledge as well as a trusted, structured, and foreseeable method of cloud use.

INTRODUCTION

The number of electronic assets, whether digitized or born digital items from paper and analogue artifacts, is expanding fast. Unlike businesses that must keep their records for a rather brief time period to adhere to the Sarbanes Oxley Act, electronic libraries and national archives need to manage daunting difficulties of long term preservation. To be able to execute the assignment to give accessibility and discovery to electronic assets over an extended time period, associations must develop schemes and mechanisms to efficiently maintaining these assets. Aside from the volume problem, another facet of electronic preservation is information heterogeneity as a result of how data might result from different computer software items unique to varied program domains. Additionally, organizations have raised their portfolios to disseminate a wide variety from documents, geo-spatial pictures, audiovisual records, web pages, and database files.

DOI: 10.4018/978-1-5225-6921-3.ch012

In this particular context, the inquiry is whether cloud-computing paradigm might help librarians and electronic archivists to fulfill the problems of preservation. Recently, cloud-computing has gained impetus in the IT world as a result of the adulthood of community protocol infrastructure, virtualization technology as well as a cost-established Service Level Agreement construction. On cloud-storage, reports have generally focused in the beginning as a possible service to be used within the archive and electronic library neighborhood. Security is often mentioned as an important issue for delicate, business, or personally-identifiable information, especially for anyone contemplating use of the cloud. It might be unrealistic to imply that a lot of cloud services are fundamentally less safe than most neighborhood information centers, although users have to be concerned regarding the security of information and wherever it is kept. The bigger public cloud providers, including Google, Microsoft, Rackspace, Amazon and the others, commit substantial amounts of effort in ensuring the safety of the data centre properties. In addition they use teams of dedicated Microsoft staff, educated and focused on making sure that their methods are as safe as one can possibly imagine. Generic standards like 270029 and ISO 270018 explain the measures to be used in preserving internet and physical security, as well as detail the measures to be taken in responding to violations. Domain-certain requirements including ISO 2779910 provide added specificity in regions including the keeping of individual data. The advice is generally adhered to by operators of community information centres enshrined in these criteria, and may fairly be requested to characterize the type and extent of the conformity by risk-management programs, or completing routine external audit.

Cloud computing can contribute to the long term preservation by balancing against the regions of potential and possibility but there are places where important problems must be comprehended by archives and resolved, especially when it comes to possible legal demands and information security. In this paper we recognised the possible hazard on cloud for electronic preservation, its effect and we proposed a threat-based methodology to overwhelm it.

BACKGROUND

Cloud computing is a new paradigm and it is the most talked about topic nowadays. Businesses talk about adopting cloud software and solutions to reduce operational cost. The most common example of cloud is the use of emails which are stored somewhere in a remote location. People upload pictures to a website such as Instagram or Facebook that stores them in cloud storage. Files are stored in Amazon Cloud drive or in shared location such as One Drive. Most videos are uploaded to YouTube or any other site. In today's world, it is tough to imagine a scenario where cloud computing has not touched our lives.

Cloud computing is a term used to signify a way of accessing software, infrastructure, and computing power from a location other than our own. The resources usually reside in someone else's computer or distant data centers. Nowadays the reach of cloud computing is so vast that the resources are located in a different country and continent that often no one have any clue of the exact location. For example the emails in a Gmail inbox. The emails do not reside in our computers. Google serves these emails from the servers that reside in any of the data centres located in Americas, Asia, or Europe.