

## Chapter 7

# Application of Cloud Computing Technologies in Academic Library Management: The National Open University of Nigeria Library in Perspective

**Olaronke O. Fagbola**  
*University of Ilorin, Nigeria*

**Ambrose E. Smart**  
*National Open University of Nigeria, Nigeria*

**Babarotimi Opeyemi Oluwaseun**  
*National Open University of Nigeria, Nigeria*

### ABSTRACT

*Cloud computing is an umbrella term used to describe a category of sophisticated on-demand computing services. Libraries generally have been adopting cloud-based solutions for different services such as electronic journal access management, integrated library system (ILS) hosting, electronic databases, digital library hosting, and cloud OPAC. This chapter discusses how cloud computing technology tools can be deployed to ensure uniformity in library services and standard of information resources available to students at all the study centers spread across the six geo-political zones. The chapter concludes that cloud computing offers many opportunities for academic libraries, and especially for the NOUN Library.*

## **INTRODUCTION**

The Internet through digital technology devices brought a lot of far reaching innovations, development and changes into the day-to-day operations of libraries generally, and academic libraries in particular. Essentially, academic libraries, which, majorly serve as the support base for teaching, research and community services in universities have moved from purely traditional to hybrid libraries and Information and Communication Technologies (ICTs) are been deployed massively and are serving as the driving force for library development and management. Undoubtedly, from a technological and access standpoint, a large portion of what a library does could be done in the cloud (Kiryakova, Angelova and Yordanova, 2015).

Cloud computing, an umbrella term used to describe a category of sophisticated, on-demand, cost saving and high availability computing services is a model that provides ubiquitous and convenient access to shared computing resources and merge computational power of different hardware devices that can be used by many (Guokoli and Ambili, 2014; Kamila, 2013; and Furht, 2010). Cloud computing is a style of computing in which dynamically scalable and often virtualized resources are provided as a service over the Internet (Tavluoglu and Korkmaz, 2014; Dhar, 2012). Hence, in cloud computing, customization and creation of a user-defined experience is the key element.

Principally, the basic idea behind cloud computing, an application service via the Internet is data sending, receiving, storing and dissemination whenever required by the user(s) (Waterloo University, 2010). Thus, in the cloud, information are stored and distributed via networks(Kamila, 2013).Consequently, with services offered by the cloud computing providers, user(s) use a variety of digital devices, including personal computers, laptops, smartphones and PDAs to access programs, storage and application development platforms over the Internet (Furht, 2010).Typical example of cloud computing service is E-mail services which are cloud-based and the sending and receiving are carried out by a Server while mails are stored off shore. Assuredly, the adoption of cloud computing technology by NOUNlibrary would go a long way to help it focus on its core mandate instead of focusing on technology to deliver the core mandate to clients.

Cloud computing technology and application are not new to libraries. For example, online databases, union catalogues (OCLC WorldCat, OPAC), electronic resources and library management software like KOHA, Liberty III are hosted in the cloud and are accessed as cloud applications. Factually, libraries today use cloud computing technology to enhance their services and operation by adding values, attracting users and for cost effectiveness (Kaushik and Kumar, 2013).Also, Corrado and Moulaison (2012) explained that cloud computing in the literary sense to a librarian entails library data and services hosted beyond the library walls and are only accessible via the Web with the aid of Internet. Consequently, Swain (2014) claimed that the adoption of cloud computing technology in library and information services brought a novel trend in the scheme of information provision and services and a great transformation in the way systems are built and services delivered, thus providing libraries with an opportunity to extend their impact to diverse patrons.

Equally, the availability of Internet access provides library users with viable alternatives of finding information using digital devices such as mobile phones, android, i-pad, i-phone, Tablets and Laptops amongst others rather than using the conventional/traditional libraries. Thus, without mincing words, with this revolution in library services delivery, it is advocated that management of academic libraries, especially the NOUN library management should be proactive with the operation and delivery of library service. This would go a long way to ensure that facilitators and students (open and distance learners) have unhindered access to quality library services regardless of their location.

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