UNITED STATES GOVERNMENT   LIBRARY OF CONGRESS

Memorandum

Office of the Inspector General

TO: James H. Billington   October 22, 2010
                     Librarian of Congress

FROM: Karl W. Schornagel
                     Inspector General

SUBJECT: Cloud Computing

Over the past few months, my office has conducted a high-level survey of the concept of "cloud computing," its applicability to the Library environment, and the current state of the Library's IT infrastructure with respect to the concept.

Cloud computing is a concept that uses remote computers to provide various services to local users through the internet. By taking advantage of the "cloud," users can harness the power of computing resources far beyond their reach, while substantially reducing the need to make massive – and expensive – investments in technology.

As the concept continues to evolve, federal agencies are exploring ways to utilize cloud computing to realize cost savings and increased efficiencies. Early adopters of cloud computing have met with success. Further, the Government Services Administration has made the acquisition process of cloud services simple through its growing "Apps.gov" Web site. The increasing adoption of cloud services is in response to the Office of Management and Budget's (OMB) push for executive branch agencies to implement data center consolidations and adopt cloud computing solutions where they represent the best value at an acceptable level of risk.

Notwithstanding OMB's push, the implementation of cloud computing has been slow-moving due to the lack of guidance addressing key security concerns. The Federal Risk and Authorization Management Program hopes to address security concerns by performing the necessary certification and accreditation process so agencies may use approved third-party cloud computing services. This will greatly reduce the effort, time, and cost required to utilize cloud computing solutions. The National Institute of Standards and Technology will provide further guidance in the future.

Cloud Computing at the Library

In July 2009, the Library's National Digital Information Infrastructure and Preservation Program (NDIIPP) announced the launch of a one-year pilot program with Duraspace, a

nonprofit organization, to test cloud technologies to enable perpetual access to digital content. The project, called DuraCloud, will provide both virtual storage and access services. This first step towards realizing the benefits of cloud computing services could lead to further cost savings from a variety of cloud-based services such as data storage, e-mail, and database management, among others.

Since it is not required to follow OMB guidance, the extent to which the Library may pursue cloud computing is uncertain. The potential benefits include not only cost and energy savings, but also the placement of the Library on the cutting edge of technology. We urge the Library to investigate avenues through which it can take advantage of the cloud computing concept to gain increased efficiencies.

OIG Review of Cloud Computing

In the future, my office will conduct a performance audit of the Library's consideration to cloud computing technology. We will be contacting you once we decide the appropriate time to conduct our review.

cc: Chief Information Officer
        Chief of Staff