

GAO Highlights

Highlights of [GAO-14-753](#), a report to congressional requesters

Why GAO Did This Study

Cloud computing is a relatively new process for acquiring and delivering computing services via information technology (IT) networks. Specifically, it is a means for enabling on-demand access to shared and scalable pools of computing resources with the goal of minimizing management effort and service provider interaction. To encourage federal agencies to pursue the potential efficiencies associated with cloud computing, the Office of Management and Budget (OMB) issued a “Cloud First” policy in 2011 that required agency Chief Information Officers to implement a cloud-based service whenever there was a secure, reliable, and cost-effective option.

GAO was asked to assess agencies’ progress in implementing cloud services. GAO’s objectives included assessing selected agencies’ progress in using such services and determining the extent to which the agencies have experienced cost savings. GAO selected for review the seven agencies that it reported on in 2012 in order to compare their progress since then in implementing cloud services; the agencies were selected using the size of their IT budgets and experience in using cloud services. GAO also analyzed agency cost savings and related documentation and interviewed agency and OMB officials.

What GAO Recommends

GAO is recommending, among other things, that the seven agencies assess the IT investments identified in this report that have yet to be evaluated for suitability for cloud computing services. Of the seven agencies, six agreed with GAO’s recommendations, and one had no comments.

View [GAO-14-753](#). For more information, contact David Powner at (202) 512-9286 or pownerd@gao.gov.

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CLOUD COMPUTING

Additional Opportunities and Savings Need to Be Pursued

What GAO Found

Each of the seven agencies reviewed implemented additional cloud computing services since GAO last reported on their progress in 2012. For example, since then, the total number of cloud computing services implemented by the agencies increased by 80 services, from 21 to 101. The agencies also added to the amount they reported spending on cloud services by \$222 million, from \$307 million to \$529 million. Further, the agencies increased the percentage of their information technology (IT) budgets allocated to cloud services; however, as shown in the table, the overall increase was just 1 percent.

Amount Agencies Allocated to Cloud Services (for Fiscal Years 2012 and 2014)

Department/Agency	Percent of IT budget	
	reported spent on cloud in 2012	Percent budgeted for cloud in 2014
Agriculture	1	3
General Services Administration	2	5
Health and Human Services	0	1
Homeland Security	1	2
Small Business Administration	0	3
State	1	2
Treasury	5	6
Total	1	2

Source: GAO analysis of agency data. | GAO-14-753

The agencies’ relatively small increase in cloud spending as a percent of their overall IT budgets, is attributed in part, to the fact that these agencies collectively had not considered cloud computing services for about 67 percent of their investments. With regard to why these investments had not been assessed, the agencies said it was in large part due to these being legacy investments in operations and maintenance; the agencies had only planned to consider cloud options for these investments when they were to be modernized or replaced. This is inconsistent with Office of Management and Budget policy that calls for cloud solutions to be considered first whenever a secure, reliable, and cost-effective option exists regardless of where the investment is in its life cycle. Until the agencies fully assess all their IT investments, they will not be able to achieve the resulting benefits of operational efficiencies and cost savings.

The agencies collectively reported cost savings of about \$96 million from the implementation of 22 of the 101 cloud services. These savings included both one-time and multiyear savings. For example, the General Services Administration saved \$2.6 million by migrating to a cloud customer service solution, and Homeland Security saved \$1.2 million from fiscal years 2011 through 2013 by implementing a cloud-based collaboration service. Agency officials cited two major reasons for why the other services they had implemented did not save money. First, a motivation for changing to some of the cloud-based services was not to reduce spending, but to improve service. Second, in selected cases, the cloud computing service opened up a new service or provided a higher quality of service; while this provided useful benefits to the agency, the associated costs negated any savings.