



At a Glance

Why We Did This Review

We sought to determine whether the U.S. Environmental Protection Agency (EPA) had:

- (1) implemented its cloud initiatives in accordance with the Federal Cloud Computing Strategy and associated requirements, and
- (2) developed formal processes to monitor cloud vendors.

Cloud computing describes a broad movement to treat information technology (IT) services as a commodity with the ability to dynamically increase or decrease capacity to match usage needs. In December 2010, the U.S. Chief Information Officer issued a "Cloud First" policy requiring that agencies default to cloud-based solutions for new IT deployments whenever a secure, reliable and cost-effective cloud option exists.

This report addresses the following EPA goal or cross-agency strategy:

- *Embracing EPA as a high-performing organization.*

For further information, contact our public affairs office at (202) 566-2391.

The full report is at:
www.epa.gov/oig/reports/2014/20140815-14-P-0332.pdf

Cloud Oversight Resulted in Unsubstantiated and Missed Opportunities for Savings, Unused and Undelivered Services, and Incomplete Policies

What We Found

The EPA developed processes to monitor cloud vendors. However, controls for the EPA's cloud computing initiatives are incomplete and need improvement. Specifically:

Improved oversight could help the EPA achieve objectives for the millions spent for cloud services and identify potential cost savings.

- The EPA's cost-benefit analysis did not adhere with guidance.
- The EPA paid full price for services not performed.
- The EPA entered into a cloud infrastructure contract that could not be used to host applications because it did not meet federal requirements. Further, there was no documented analysis to determine whether the EPA should continue with the contract.
- The EPA had not performed an analysis to determine whether it would be in the EPA's best interest to convert its internal infrastructure to meet all of the National Institute of Standards and Technology essential characteristics of a cloud.
- The EPA's Office of Environmental Information did not implement a strategy to evaluate the EPA's entire portfolio of IT applications to determine which applications can be consolidated, retired or moved to the cloud.
- The EPA's policies and procedures for moving to the cloud are incomplete and need improvement.

As a result, the EPA paid \$2.3 million for services that were not fully rendered or did not comply with federal requirements. Also, EPA management does not have reasonable assurance that the agency's cloud initiatives will be effective, efficient, and in compliance with applicable laws and regulations.

Recommendations and Planned Corrective Actions

We recommend that the Assistant Administrator for Environmental Information and Assistant Administrator for Administration and Resources Management undertake a number of corrective actions to address deficiencies in the EPA's cloud computing initiatives, including: improving related policies and procedures; providing additional training and oversight to contracting officers; performing documented cost benefit analyses that are in compliance with federal requirements; and implementing a strategy to perform a documented analysis of all the assets in the EPA's IT portfolio to determine which assets should be consolidated, retired or moved to the cloud. The agency indicated it has taken action on two of the 11 recommendations. The remaining recommendations are considered unresolved pending the agency's response to the final report.