



At a Glance

Why We Did This Review

The U.S. Environmental Protection Agency (EPA), Office of Inspector General (OIG), conducted this audit to evaluate select agency efforts to adopt cloud computing technologies and to review executed contracts between the agency and cloud service providers for compliance with applicable standards. This audit was conducted as part of a governmentwide initiative by the Council of the Inspectors General on Integrity and Efficiency (CIGIE). Information gathered during the subject audit will be incorporated into a governmentwide report to be released by CIGIE.

The 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/2014/20140724-14-P-0323.pdf

EPA Is Not Fully Aware of the Extent of Its Use of Cloud Computing Technologies

What We Found

The CIGIE developed a survey and asked its members to contact their respective agencies and collect information about the deployment of cloud computing technologies. Additionally, CIGIE provided a matrix template for each Inspector General to complete to standardize the results of the CIGIE collaboration effort, and to assist with the completion of the consolidated report. In consultation with the CIGIE, the EPA OIG selected one system to review and completed the provided matrix with test results.

EPA officials lack confidence that offices recognize its full use of cloud computing for agency operations.

The EPA OIG selected the current contract for the Office of Water's Permit Management Oversight System (PMOS) for testing. In 2012, the Office of Water used the Office of Acquisition Management to contract for a vendor to maintain and host the PMOS application. Although the PMOS was not included in the EPA's response document to the CIGIE survey, the PMOS is currently hosted by an EPA subcontractor whose hosting environment has cloud characteristics. The subcontractor's hosting environment also appeared to meet the definition of a "cloud," as defined by the National Institute of Standards and Technology (NIST) Special Publication 800-145, *The NIST Definition of Cloud Computing*.

The PMOS enables the EPA to track general and tribal permits at a summary level. The PMOS captures limited information on these permits, which enables the EPA to track the universe and status of these permits. The PMOS is used to prepare National Pollutant Discharge Elimination System reports for the Office of Management and Budget.

Our audit work disclosed management oversight concerns regarding the EPA's use of cloud computing technologies. These concerns highlight the need for the EPA to strengthen its catalog of cloud vendors and processes to manage vendor relationships to ensure compliance with federal security requirements. In particular:

- The EPA did not know when its offices were using cloud computing.
- The EPA should improve the oversight process for prime contractors (to include ensuring subcontractors comply with federal security requirements and establishing service-level agreements for cloud services).
- There is no assurance that the EPA has access to the subcontractor's cloud environment for audit and investigative purposes.
- The subcontractor is not compliant with the Federal Risk and Authorization Management Program.

The EPA indicated the provided matrix is factually correct. The EPA response and our comments are at appendix B.