March 2021

DATA CENTER OPTIMIZATION

Agencies Report Progress and Billions Saved, but OMB Needs to Improve Its Utilization Guidance

Why GAO Did This Study

In December 2014, Congress enacted federal IT acquisition reform legislation known as FITARA, which included provisions related to ongoing federal data center consolidation efforts. OMB's federal Chief Information Officer launched DCOI to build on prior data center consolidation efforts and improve federal data centers' performance.

FITARA included a provision for GAO to annually review agencies' data center inventories and strategies. This report addresses (1) agencies' progress on data center closures and the related savings that have been achieved, and agencies' plans for future closures and savings; (2) agencies' progress against OMB's data center optimization targets; and (3) the effectiveness of OMB's metric for server utilization and how the agencies are implementing it. To do so, GAO reviewed the 24 DCOI agencies' data center inventories as of August 2020, their reported cost savings documentation and data center optimization strategic plans, and OMB's revised utilization metric.

What GAO Recommends

GAO reiterates that agencies need to address the 53 recommendations previously made to them that have not yet been implemented. GAO is making one new recommendation to OMB to revise its server utilization metric to more consistently address server efficiency. OMB had no comments on the report and the recommendation directed to the agency. Of the 24 DCOI agencies, five agreed with the information in the report, six did not state whether they agreed or disagreed, and 13 had no comments.

View GAO-21-212. For more information, contact Carol C. Harris, (202) 512-4456 or harriscc@gao.gov
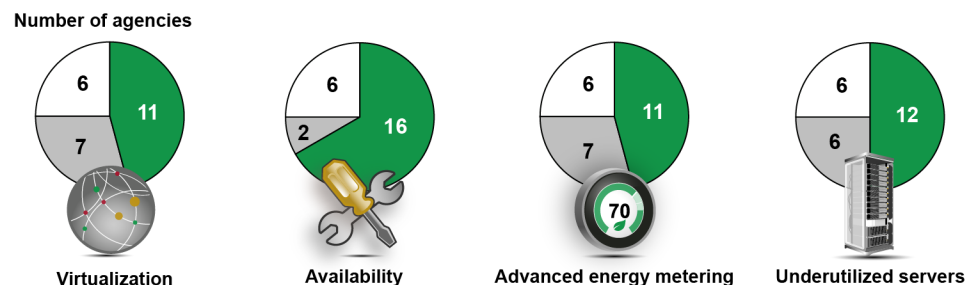
What GAO Found

The 24 agencies participating in the Office of Management and Budget's (OMB) Data Center Optimization Initiative (DCOI) continue to report progress toward meeting OMB's goals for closing data centers and achieving the related cost savings. According to data submitted by the 24 agencies, almost all of them met or planned to meet their closure and cost savings goals for fiscal years 2019 and 2020. As of August 2020, the agencies reported that they expected to achieve 230 data center closures, resulting in $1.1 billion in savings, over the 2-year period. Agencies expected to realize a cumulative total of $6.24 billion in cost savings and avoidances from fiscal years 2012 through 2020.

However, agencies have excluded approximately 4,500 data centers from their inventories since May 2019 due to a change in the definition of a data center. Specifically, in June 2019, OMB narrowed the definition of a data center to exclude certain facilities it had previously identified as having potential cybersecurity risks. GAO reported that each such facility provided a potential access point, and that unsecured access points could aid cyber attacks. Accordingly, GAO recommended that OMB require agencies to report those facilities previously reported as data centers so that visibility of the risks of these facilities was retained. However, OMB has not taken action to address the recommendation. Overall, GAO has made 125 recommendations since 2016 to help agencies meet their DCOI goals, but agencies have not implemented 53.

The 24 agencies reported varied progress against OMB's data center optimization targets for fiscal year 2020 (see figure).

Agency-Reported Progress towards Meeting Office of Management and Budget (OMB) Data Center Optimization Targets, as of August 2020

Number of agencies

Virtualization: 6, 7, 11
Availability: 6, 2, 16
Advanced energy metering: 6, 7, 11, 70
Underutilized servers: 6, 6, 12

OMB metrics: Met metric | Did not meet metric | Not applicable

Source: GAO analysis of data from OMB's Information Technology Dashboard. | GAO-21-212

Notes: Virtualization measures the number of servers and mainframes serving as a virtual host. Advanced energy metering counts data centers with metering to measure energy efficiency. A metric is not applicable if an agency does not have any agency-owned data centers or if its remaining centers are exempted from optimization by OMB.

In June 2019, OMB revised the server utilization metric to direct agencies to develop their own definitions of underutilization, and then count their underutilized servers. As a result, agencies adopted widely varying definitions and were no longer required to report actual utilization, a key measure of server efficiency.

United States Government Accountability Office