

# GAO Highlights

Highlights of [GAO-23-106247](#), a report to congressional committees

## Why GAO Did This Study

Cloud computing enables agencies to have on-demand access to shared computing resources. The costs of doing so are often lower than if the agencies were maintaining the resources. In fiscal year 2022, major federal agencies obligated about \$7 billion for cloud computing contracts, including approximately \$3 billion by DOD. Cloud service providers charge users fees for transferring data out of the cloud—known as data egress fees. Committee reports from the Senate and House Armed Services Committees accompanying the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023 include provisions for GAO to review cloud data egress fees at DOD, including their effects on vendor lock-in.

This report determines the extent to which DOD (1) considered data egress fees when procuring and implementing cloud services and their potential for vendor lock-in and (2) mitigated the impact of data egress fees and tracked and reported on them. To assess DOD's cloud data egress fees, GAO analyzed relevant department guidance on cloud services and the tracking and reporting of cloud expenditures. It also reviewed supporting department documentation on cost reporting and tracking. In addition, GAO interviewed DOD officials.

## What GAO Recommends

GAO is making one recommendation to the Department of Defense to develop a plan and time frame for adopting a tool to track data egress fees across the department. DOD concurred with the recommendation.

View [GAO-23-106247](#). For more information, contact David B. Hinchman at (214) 777-5719 or [hinchmand@gao.gov](mailto:hinchmand@gao.gov).

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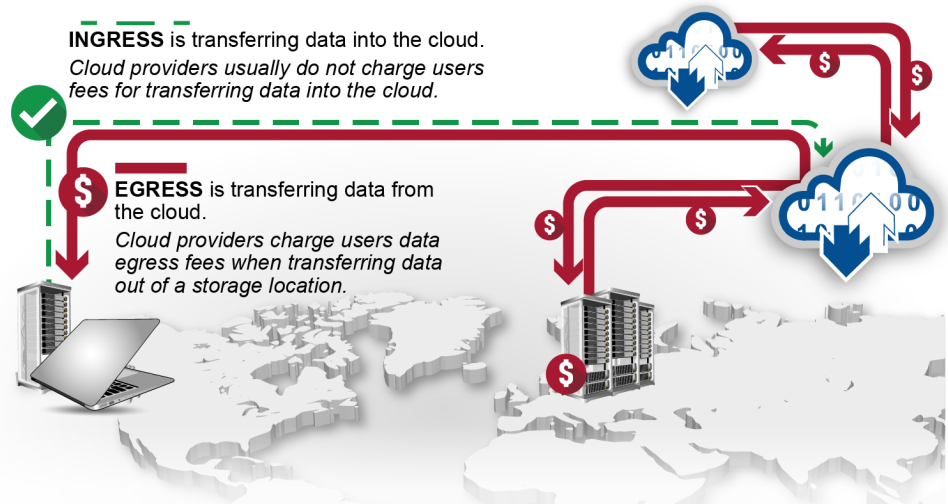
## CLOUD COMPUTING

### DOD Needs to Improve Tracking of Data User Fees

## What GAO Found

Data user fees (ingress and egress) are related to how users transfer and access data in a cloud environment. Data ingress is transferring data into the cloud and data egress is transferring data from the cloud. While data ingress is often free to users, cloud service providers generally charge data egress fees for transferring data out of storage (see figure).

Figure: Transfer of Data into and out of the Cloud



Sources: GAO analysis of market data; GAO (icons); pyty/stock.adobe.com (map). | GAO-23-106247

The Department of Defense (DOD) has begun to consider data egress fees when procuring and implementing cloud services. The department's recent contract negotiations with commercial providers resulted in discounts on data fees, including data egress fees. Vendor lock-in can happen in cloud computing when the cost of moving to a new provider is so high that a user stays with their incumbent provider. However, DOD officials stated that egress fees had not been a primary cause for vendor lock-in. These officials added that other factors could cause vendor lock-ins, including a lack of specific skills by government staff, or the reliance on cloud services unique to a specific cloud provider.

DOD has mechanisms that could mitigate the impact data egress fees could have on DOD as it procures and implements cloud services across the department. DOD officials reported that data egress fees account for less than 1 percent of known cloud expenditures. However, the department does not have the capability to track and report on these fees. In addition, DOD's contract-specific tools do not track cloud expenditures, including data egress fees department-wide. DOD officials identified improved insight into cloud expenditures through recent department-wide contracts such as the Joint Warfighting Cloud Capability—a cloud contract with four commercial service providers—and other tools. However, DOD does not yet have a plan or time frame for adopting a tool that tracks data egress fees. Until DOD acquires and implements such a tool, it will continue to lack full insight into the impact of egress fees.