



Office of Inspector General
U.S. Government Accountability Office

Data Egress

Opportunities Exist for GAO to Strengthen
Procedures for Management of Data Egress
Fees

February 2025
OIG-25-1



OFFICE OF INSPECTOR GENERAL

GOVERNMENT ACCOUNTABILITY OFFICE

February 21, 2025

To: Gene L. Dodaro
Comptroller General of the United States

From: L. Nancy Birnbaum
Inspector General

A handwritten signature in black ink, appearing to be "L. Nancy Birnbaum".

Subject: Data Egress: Opportunities Exist for GAO to Strengthen Procedures for Management of Data Egress Fees (OIG-25-1)

Attached for your information is our report, *Data Egress: Opportunities Exist for GAO to Strengthen Procedures for Management of Data Egress Fees* (OIG-25-1). The audit objectives were to (1) describe GAO's efforts to address data egress fees in procuring cloud services and (2) assess the extent to which the estimated costs of GAO's cloud services programs quantify data egress fees.

We made two recommendations: (1) establish GAO's cost management procedures for its cloud systems, including addressing data egress fees and the implementation and review of alerts and reports; and (2) develop an oversight mechanism to ensure that all fees, including data egress fees, are quantified in the cost estimate, or the exclusion of any costs is documented. In its written comments, GAO concurred with the recommendations and described actions planned and taken to address them. Management comments are included in appendix II of our report. We expect GAO to inform us of actions taken by **April 23, 2025**.

We are sending copies of this report to the other members of GAO's Executive Committee, Congressional Oversight Committees, the Audit Advisory Committee, and other GAO managers, as appropriate. The report is also available on the GAO website at [Inspector General | U.S. GAO](#) and [Oversight.gov](#).

If you have questions about this report, please contact me at (202) 512-5748 or oig@gao.gov.

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Introduction

According to GAO's 2022–2027 strategic plan, it will reduce costs of operations, in part, by leveraging cloud-based technologies.¹ Transferring data into the cloud (data ingress) is often free to users; however, some providers charge data egress fees for accessing data or transferring it out of the cloud.² GAO identified two cloud platforms it uses that incur data egress fees. In this report, these platforms are identified as cloud platform 1 (CP1) and cloud platform 2 (CP2). From April 2023 through March 2024, GAO reported it incurred about \$7,300 in data egress fees.

The Office of Inspector General (OIG) conducted this audit to (1) describe GAO's efforts to address data egress fees in procuring cloud services and (2) assess the extent to which the estimated costs of GAO's cloud services programs quantify data egress fees. Details regarding the OIG's objectives, scope, and methodology are included in appendix I.

Audit Results

Despite the minimal costs GAO has incurred for data egress, opportunities exist for GAO to improve its monitoring and cost estimating processes for cloud services. The OIG found that, due to other priorities, GAO did not establish formal procedures implementing cloud cost management policies such as instituting and reviewing budget threshold alerts and cloud service usage reports. Due to the lack of procedures, GAO may not fully meet its strategic objective related to managing and reducing the cost of its cloud-based technologies in the future.

The OIG also found that GAO officials did not include data egress fees in a major system's³ cost estimate and did not document the exclusion because they deemed data egress fees minimal. As a result, GAO may not be fully aware of the total costs for its cloud initiatives, which could impact its ability to implement new projects and the operation and maintenance of existing initiatives.⁴

Finding 1: GAO Established a Policy for Cloud Services Cost Management, but Did Not Establish Procedures for Policy Implementation

One of GAO's strategic objectives involves managing costs and ensuring business operations are efficient and effective. GAO further states it will reduce costs of

¹ GAO, *GAO 2022–2027 Strategic Plan: Serving Congress and the Nation*, [GAO-22-1SP](#) (Washington, D.C.: Mar. 15, 2022), 36. The cloud refers to technology solutions that offer access to a shared pool of computing resources that can be quickly accessed.

² Examples of data egress that could incur charges include moving data from one region to another, from the cloud to individual users (such as downloading data to a local desktop), or from the cloud to an agency data center. In addition, movement of data from an old vendor to a new vendor may also incur data egress fees.

³ The value of the 4-year contract for this system is about \$9.4 million.

⁴ [GAO-22-1SP](#), 36.

operations, in part, by leveraging cloud-based technologies.⁵ To help achieve these results, GAO should design control activities through written policies and procedures.⁶

During this audit, GAO established its policy for cloud cost management.⁷ The policy covered usage and monitoring of fees but did not specifically address data egress fees. A GAO official explained these fees would likely be addressed in procedures for reporting metrics. According to GAO, due to other priorities, it had not established the written procedures necessary to implement this policy, including processes, standards, and templates. According to GAO, these procedures could describe how cloud system costs, including data egress fees, would be tracked, monitored, and reported.

GAO had two tools available for monitoring its data egress fees in CP1 and CP2: budget threshold alerts and cloud service usage reports.⁸ During this audit, GAO implemented budget threshold alerts regarding monthly data egress fees for CP1 but had no such alerts set for CP2.⁹ According to a GAO official, none of GAO's CP2 environments had significant data egress fees, and alerts could be established if a service generated a significant cost for data egress.¹⁰

The second tool for monitoring and reporting on data egress fees was cloud service usage reports. GAO cloud administrators could have created reports for CP1 and CP2 that allowed officials to view cloud service usage costs, including data egress. For both budget threshold alerts and cloud service usage reports, GAO did not have procedures detailing the frequency or threshold levels for these alerts and reports. GAO also did not have procedures regarding how this information would be reviewed and adjusted to maximize cost savings.

The implementation of written procedures may help GAO manage costs and ensure its operations are efficient and effective. Therefore, GAO has an opportunity to improve its monitoring of data egress costs by establishing written procedures.

⁵ [GAO-22-1SP](#), 36.

⁶ GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014), 45 and 56.

⁷ GAO, *POL – Cloud Cost and Budget Management Policy*, POL011 (Sept. 4, 2024).

⁸ Budget threshold alerts are used to notify key stakeholders when tracked cost thresholds are exceeded. Cloud service usage reports provide details of billable cloud services, including data egress fees.

⁹ Prior to the OIG's audit, GAO had a budget threshold alert that included data elements in addition to data egress; the alert did not specifically identify the data egress fees.

¹⁰ From April 1, 2023, to March 31, 2024, the service incurred about \$510 in data egress fees.

Finding 2: GAO's Cost Estimates Should Include or Document Exclusion of All Costs, Including Data Egress Fees

GAO policy requires that every Information Systems and Technology Services (ISTS)¹¹ project cost estimate reflect the entire scope of work and estimate all costs to the “lowest element” through the life of the project.¹² GAO's cost estimating best practices also state that cost estimates should include all costs.¹³ Further, if items such as data egress fees are excluded from the estimate, the exclusion should be documented.¹⁴ However, the OIG found that GAO neither included nor documented the exclusion of data egress fees in a major system's cost estimate.

According to a GAO official, the system's cost estimate was documented in Information Technology Investment Committee briefings.¹⁵ A February 2023 briefing document included costs associated with the system's contract and annual operation and maintenance costs but did not specifically identify data egress fees. Supporting documentation also did not include data egress fees.

According to a GAO official, cloud service data egress fees are generally included in other costs and are not usually listed separately. According to another GAO official, data egress fees were included in the operations and maintenance costs for the system, but GAO was unable to provide documentation to support this assertion. Further, according to a GAO official, GAO did not estimate data egress disposal¹⁶ costs as part of the cost estimate for the system.¹⁷ At the OIG's request, GAO estimated annual data egress fees for the system at about \$480.¹⁸ According to GAO, if file sizes were to reach a “worst-case” scenario of 1.6 megabytes, the system's data egress costs could rise as high as about \$8,300 annually.

During the audit, GAO officials stressed that the system's data egress fees were minimal and did not need to be detailed in the estimate. While current data egress costs for this particular system are relatively small, GAO policy requires that all

¹¹ ISTS provides GAO's technology support.

¹² GAO, *Estimating Cost for ISTS Team Projects* (Sept. 2022), 4 and 5. The entire life cycle is defined as research and development, investment, operating and supporting, and retirement and disposal.

¹³ GAO, *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*, [GAO-20-195G](#) (Washington, D.C.: Mar. 12, 2020), 31 and 39.

¹⁴ *Estimating Cost for ISTS Team Projects*, 5 and 8; and [GAO-20-195G](#), 31 and 39.

¹⁵ At the time, the Information Technology Investment Committee served as the principal GAO mechanism for prioritizing the funding of information technology initiatives and subsequently overseeing them.

¹⁶ Disposal refers to the termination of a system. For example, disposal may occur when an entity decides to contract with a different vendor for a similar software solution.

¹⁷ At the time of contract award, GAO could have been charged egress fees for leaving the cloud platform. During the course of the audit, the vendor stopped charging customers for the data egress necessary to leave the cloud platform. Other cloud providers' postures related to data egress fees could differ, and decisions on whether to charge data egress fees are subject to change.

¹⁸ GAO used the contractor's recommended formula, which included staff usage and file size projections, to project the system's annual data egress fee costs.

costs through the life of the project be detailed in the cost estimate or their exclusion documented.¹⁹ In addition, this system is just one cloud service; as GAO continues to expand its presence in the cloud, it could incur additional data egress fees from other cloud service providers. Without cost estimates that include data egress fees, GAO may not be fully aware of the total costs for cloud initiatives, which could impact its ability to implement new projects and the operation and maintenance of existing initiatives.

Conclusion

To ensure GAO meets its strategic objective for efficient and effective business operations, it needs to formalize cost management procedures for cloud systems, including data egress fees. By establishing written procedures, GAO could better support its efforts to manage and reduce costs through cloud-based technologies. Further, GAO should follow its existing requirements and best practices by including all costs (such as data egress fees) or documenting the exclusion of certain costs. Without taking these steps, GAO may not capture all costs for its cloud services, potentially impacting future planning, budgeting, and management of projects.

Recommendations for Executive Action

The OIG recommends the Chief Information Officer:

1. Establish GAO's cost management procedures for its cloud systems, including addressing data egress fees and the implementation and review of alerts and reports.
2. Develop an oversight mechanism to ensure that all fees, including data egress fees, are quantified in the cost estimate, or the exclusion of any costs is documented.

Agency Comments

The OIG provided GAO with a draft of this report for review and comment. In its written comments, which are reproduced in full in appendix II, GAO concurred with the recommendations and described actions planned and taken to address them. The OIG will monitor GAO's actions to address the recommendations and will close them when sufficient evidence demonstrating progress is received.

¹⁹ *Estimating Cost for ISTS Team Projects*, 4, 5, and 8.

Appendix I: Objectives, Scope, and Methodology

This report (1) describes GAO's efforts to address data egress fees in procuring cloud services and (2) assesses the extent to which the estimated costs of GAO's cloud services programs quantify data egress fees.

To achieve the first objective, the OIG reviewed *GAO 2022–2027 Strategic Plan*,²⁰ *Standards for Internal Control in the Federal Government*,²¹ and *Cloud Cost and Budget Management Policy*.²² The team also examined a GAO cloud service provider's contract and other documentation describing GAO's efforts to address data egress fees, including:

- contract documentation,
- data egress budget threshold alert documentation, and
- CP1 and CP2 usage reports.

Further, the team requested information from and conducted interviews with GAO officials involved in the procurement and implementation of cloud services to review GAO's efforts related to data egress.

To achieve the second objective, the team identified and reviewed GAO's *Estimating Cost for ISTS Team Projects*²³ and *Cost Estimating and Assessment Guide*.²⁴ The team judgmentally selected one major cloud service for review. The OIG selected this system because it had the largest project cost estimate and, according to GAO, it had the greatest potential to generate data egress fees. The team examined the available cost estimate documentation for the system. To understand the extent to which GAO's cloud service generates data egress fees and whether these fees were considered in the cost estimate, the OIG requested information and conducted interviews with GAO officials involved with the system and its cost estimate.

The OIG conducted this performance audit from February 2023 through January 2025 in accordance with generally accepted government auditing standards. These standards require the OIG to plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for its findings and conclusions based on the audit objectives. The OIG believes that the evidence obtained provides a reasonable basis for its findings and conclusions based on the audit objectives.

²⁰ [GAO-22-1SP](#).

²¹ [GAO-14-704G](#).

²² *POL – Cloud Cost and Budget Management Policy*.

²³ *Estimating Cost for ISTS Team Projects*.

²⁴ [GAO-20-195G](#).

Appendix II: Agency Comments



Memorandum

Date: February 11, 2025

To: Inspector General, L. Nancy Birnbaum

From: Chief Information Officer, Beth Killoran

Subject: Response to Draft Report on Data Egress: Opportunities Exist for GAO to Strengthen Procedures for Management of Data Egress Fees
Engagement Code 900489

Beth Anne B Killoran
Digitally signed by
Beth Anne B Killoran
Date: 2025.02.11
12:50:55 -05'00'

Thank you for the opportunity to review and comment on your draft report, *Data Egress: Opportunities Exist for GAO to Strengthen Procedures for Management of Data Egress Fees*. Information Systems and Technology Services (ISTS) concurs with the OIG's draft report recommendations. Below are GAO's comments on the draft report and action plan to address the recommendations.

As the report notes, GAO uses two cloud platforms that incur data egress fees. Reviewed the period from April 2023 through March 2024, where GAO incurred about \$7,300 in data egress fees.

Recommendations for Executive Action

The OIG recommends the Chief Information Officer:

1. Establish GAO's cost management procedures for its cloud systems, including addressing data egress fees and the implementation and review of alerts and reports.
2. Develop an oversight mechanism to ensure that all fees, including data egress fees, are quantified in the cost estimate, or the exclusion of any costs is documented.

GAO Response

GAO concurs with the recommendations. We have taken the following steps to address these including:

- Review of the report and recommendations to determine how best to meet them.

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- Requested that each Cloud vendor generate a report to notify GAO if we exceed a defined cost threshold.
- Began work across CAO to incorporate data egress language into existing contracts and future task orders while we establish formal processes.

Moving forward we will:

Develop formalized cost management procedures and processes. This will include how we will ensure all fees, and any exclusions, are documented in the cost estimation stage. We are also updating cost estimation guidance and reviews to include a step to confirm fees and cost exclusions are documented.

cc: Paul Johnson, Acting CAO/CFO
Bill Anderson, Controller
Vera Ashworth, Deputy Chief Information Officer
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Appendix III: OIG Contact and Staff Acknowledgments

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