



Treasury Inspector General for Tax Administration

MANAGEMENT PRACTICES OVER END-USER COMPUTER SERVER STORAGE NEED IMPROVEMENT TO ENSURE EFFECTIVE AND EFFICIENT STORAGE UTILIZATION

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Highlights

Highlights of Report Number: 2007-20-103 to the Internal Revenue Service Chief Information Officer.

IMPACT ON TAXPAYERS

The Internal Revenue Service (IRS) needs to improve management practices over end-user computer server storage to ensure effective and efficient utilization of storage and budget resources. In Fiscal Years 2003 through 2006, the Modernization and Information Technology Services (MITS) organization spent \$19.9 million to purchase server storage capacity and support. However, only 27 percent of the available storage was being used on the 2,253 servers reviewed. In addition, the IRS had not established policies and procedures for monitoring end-user computer server storage usage. As a result, it may not have most efficiently used its resources.

WHY TIGTA DID THE AUDIT

This audit was initiated to assess the effectiveness and efficiency of the IRS management practices over the end-user computer server storage environment for employees using the IRS Microsoft Windows computer networks. The IRS requires a large and complex computer environment, which includes computer servers to process and store taxpayer, financial, and administrative data. These servers are managed by several functions within the MITS organization. TIGTA has previously reported on the storage management practices of IRS mid-range and mainframe computers.

WHAT TIGTA FOUND

Storage management practices can be improved to provide for more effective and efficient server storage utilization and better informed storage purchasing decisions. For example, based on the unused storage rate of 73 percent, \$14.6 million of the \$19.9 million spent to purchase storage capacity and support during Fiscal Years 2003 through 2006 represents an inefficient use of resources. In the two prior audits of IRS storage management practices, TIGTA reported the IRS should consider storage
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utilization when assessing the need to purchase additional storage. The IRS redirected \$9.3 million of Fiscal Years 2006 through 2007 budgeted storage funds and put them to better use on higher priority information technology infrastructure needs.

The IRS also did not have an accurate inventory of all available server storage space. Finally, the IRS Server Consolidation and Virtualization project was not following required project management procedures.

WHAT TIGTA RECOMMENDED

The Chief Information Officer should (1) centralize management of all MITS organization storage servers where appropriate; (2) periodically analyze storage utilization to ensure storage space is efficiently used prior to purchasing any additional storage capacity; (3) ensure the MITS organization establishes formal policies and procedures over the assignment and monitoring of end-user computer server storage space; (4) resolve server mismatches between records on the Tivoli[®] inventory system and Information Technology Asset Management System and reopen the prior corrective action regarding resolution of such mismatches until it is completed; (5) define the future inventory system design requirements to meet all user needs and implement one reliable computer inventory system; and (6) ensure required project management procedures are followed by the Server Consolidation and Virtualization project.

In their response to the report, IRS officials stated they agreed with all recommendations except the first part of Recommendation 3 and plan to take an alternative corrective action to the second part of Recommendation 4. Planned corrective actions include centralizing management of storage servers where appropriate, analyzing storage utilization quarterly, defining policies and procedures, and synchronizing the Information Technology Asset Management System with supporting operational databases. For Recommendation 3, IRS management did not agree to assign shared storage space to employees based on industry best practices, stating storage is assigned to employees based on their business needs. For Recommendation 4, management plans to open a new corrective action. TIGTA continues to believe management could reduce storage costs by using the industry best practice of 200 megabytes for most employees and allowing exceptions to this policy for employees who have a business need for additional storage based on their assigned duties. TIGTA concurs with the planned alternative corrective action.

READ THE FULL REPORT

To view the report, including the scope, methodology, and full IRS response, go to:

<http://www.treas.gov/tigta/auditreports/2007reports/200720103fr.pdf>.

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