



# OFFICE OF INSPECTOR GENERAL

UNITED STATES POSTAL SERVICE

## Nationwide Information Technology Hardware Inventory

### Audit Report

Report Number  
IT-AR-16-009

July 19, 2016





# OFFICE OF INSPECTOR GENERAL

## UNITED STATES POSTAL SERVICE

## Highlights

***Overall, the Postal Service has an accurate inventory of hardware assets connected to the IT network (56.x.x.x network) at the 15 facilities we visited.***

### Background

Information Technology (IT) hardware asset management is tracking and managing the physical components of computers and computer networks. The objective of hardware asset management is to provide accountability and inventory visibility for computer hardware.

Organizations should actively manage all hardware devices connected to the network so they can detect unauthorized devices and allow only authorized devices to gain access. According to the SysAdmin, Audit, Networking, and Security Institute, “Inventory of Authorized and Unauthorized Devices” ranked first on the list of the 20 most critical IT security controls. This ranking highlights that managing hardware assets is essential to effectively responding to security events.

The U.S. Postal Service’s network supports and maintains over 145,000 desktop computers, 23,000 notebook computers, 81,000 printers, and 310,000 hand-held scanners. The Postal Service IT team also supports 45,700 point-of-sale terminals and 2,850 self-service retail kiosks nationwide. The Postal Service organizational units in physical possession of IT asset hardware are responsible for those assets and record keeping relating to them.

In March 2015, the U.S. Postal Service Office of Inspector General published a report titled *Hardware Inventory Management – Greater Boston District* (Report Number IT-AR-15-004). The report identified significant security control weaknesses in how hardware assets were managed and safeguarded. We conducted this nationwide audit to determine if the Postal Service had nationwide issues similar to the issues identified in the Greater Boston district.

The objective of the current audit was to determine if the Postal Service had an accurate physical inventory of computer hardware assets connected to the IT network.

### What The OIG Found

Overall, the Postal Service has an accurate inventory of hardware assets connected to the IT network (56.x.x.x network) at the 15 facilities we visited in five of the seven areas. We verified the physical location of 674 of the 677 (99 percent) hardware assets.

### What The OIG Recommended

The Postal Service had an accurate inventory of hardware assets connected to the IT network at the 15 facilities we visited; therefore, we are not making any recommendations.

# Transmittal Letter



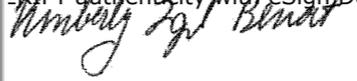
OFFICE OF INSPECTOR GENERAL  
UNITED STATES POSTAL SERVICE

July 19, 2016

**MEMORANDUM FOR:** JEFFREY C. JOHNSON  
VICE PRESIDENT, INFORMATION TECHNOLOGY

MICHAEL J. AMATO  
VICE PRESIDENT, ENGINEERING SYSTEMS

ROBERT CINTRON  
VICE PRESIDENT, NETWORK OPERATIONS

E-Signed by Kimberly Benoit   
VERIFY authenticity with eSign Desktop  


**FROM:** Kimberly F. Benoit  
Deputy Assistant Inspector General  
for Technology

**SUBJECT:** Audit Report – Nationwide Information  
Technology Hardware Inventory  
(Report Number IT-AR-16-009)

This report presents the results of our audit of the U.S. Postal Service's Nationwide Information Technology Hardware Inventory (Project Number 16TG007IT000).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Jason M. Yovich, director, Information Technology, or me at 703-248-2100.

Attachment

cc: Corporate Audit and Response Management

# Table of Contents

Cover	
Highlights.....	1
Background.....	1
What The OIG Found.....	1
What The OIG Recommended .....	1
Transmittal Letter.....	2
Findings.....	4
Introduction .....	4
Summary.....	4
Physical Inventory Verification .....	4
Recommendations.....	6
Management’s Comments .....	6
Evaluation of Management’s Comments .....	6
Appendices.....	7
Appendix A: Additional Information .....	8
Background .....	8
Objective, Scope, and Methodology .....	9
Prior Audit Coverage .....	10
Appendix B: Management’s Comments.....	11
Contact Information .....	13

# Findings

**Management took action to label a previously unlabeled hardware asset.**

## Introduction

This report presents the results of our audit of the U.S. Postal Service's Nationwide Information Technology Hardware Inventory (Project Number 16TG007IT000). Our objective was to determine if the Postal Service has an accurate physical inventory of hardware assets connected to the information technology (IT) network. See [Appendix A](#) for additional information about this audit.

Organizations should actively manage all hardware devices connected to the network so they can detect unauthorized devices and allow only authorized devices to gain access. The Postal Service's network supports and maintains over 145,000 desktop computers, 23,000 notebook computers, 81,000 printers, and 310,000 hand-held scanners. The Postal Service IT team also supports 45,700 point-of-sale terminals and 2,850 self-service retail kiosks nationwide.

The U.S. Postal Service Office of Inspector General (OIG) published an earlier report titled *Hardware Inventory Management – Greater Boston District* (Report Number IT-AR-15-004, dated March 25, 2015). The report states 49 out of 182 active systems sampled at the three facilities we visited were not located. We conducted this nationwide audit to determine whether the Postal Service had nationwide issues similar to those identified in the Greater Boston District.

## Summary

The Postal Service has an accurate inventory of hardware assets connected to the IT network at the 15 facilities we visited. Specifically, we verified the physical location of 674 of the 677 (99 percent) hardware assets at these facilities. We could not physically locate two hardware assets connected to the network and one additional asset<sup>1</sup> was not labeled. Management took corrective action to label the asset, but they could not determine the asset type for the two assets we could not locate during our audit.

## Physical Inventory Verification

This audit focused on physical inventory of hardware assets connected to the IT network. We judgmentally selected 15 facilities to visit, which are in five of the seven Postal Service areas. We verified the physical location of 674 of the 677 (99.6 percent) hardware assets at the facilities we visited. We could not physically locate two hardware assets<sup>2</sup> connected to the network in the Northland District and one asset was not labeled in the Northern Virginia District. During our audit, management took corrective action to label the asset. [Figure 1](#) summarizes our results.

---

<sup>1</sup> We identified this asset as an access control panel at the Northern Virginia District.

<sup>2</sup> Postal Service management was unable to determine the type of assets in these two instances. This only represents 0.3 percent of all assets in our audit; therefore, we determined this is low risk. The OIG was only able to identify the Internet protocol addresses for the two assets.

**The Postal Service is working with the U.S. Department of Homeland Security on the Continuous Diagnostics and Monitoring program.**

**Figure 1. Asset Inventory Verification Results**



Source: OIG analysis.

Overall, the Postal Service has an accurate inventory of hardware assets connected to the IT network (56.x.x.x network) at the 15 facilities we visited.

The OIG conducted the *Hardware Inventory Management – Greater Boston District* audit between September 2014 and March 2015. The audit determined management did not have an accurate inventory of hardware assets connected to the Postal Service network because 27 percent of the systems sampled at three facilities in the Greater Boston District were not located.

The report made four recommendations, two of which related to improving controls and implementing procedures for the Postal Service’s Asset Inventory Management System. In September 2015, postal management published instructions titled *Ensuring Data Integrity of IT Hardware Assets in the Asset Management System*. These instructions state that the installation head, functional manager, material accountability officer, and IT managers in possession of IT hardware assets are responsible for those assets and records pertaining to them.

For the remaining recommendations, the Postal Service is working with the U.S. Department of Homeland Security on the Continuous Diagnostics and Monitoring program, which should provide the Postal Service with a real-time inventory system of all information resources by the end of fiscal year 2017.

# Recommendations

The Postal Service had an accurate inventory of hardware assets connected to the IT network at the 15 facilities we visited; therefore, we are not making any recommendations.

## Management's Comments

Management agreed with the finding and stated this is a reflection of continued efforts that the Postal Service has taken to improve asset identification and accountability. See [Appendix B](#) for management's comments in their entirety.

## Evaluation of Management's Comments

Although the report does not contain any recommendations, the OIG considers management's comments responsive.

# Appendices

*Click on the appendix title  
to the right to navigate  
to the section content.*

Appendix A: Additional Information .....	8
Background .....	8
Objective, Scope, and Methodology .....	9
Prior Audit Coverage .....	10
Appendix B: Management's Comments.....	11

## Appendix A: Additional Information

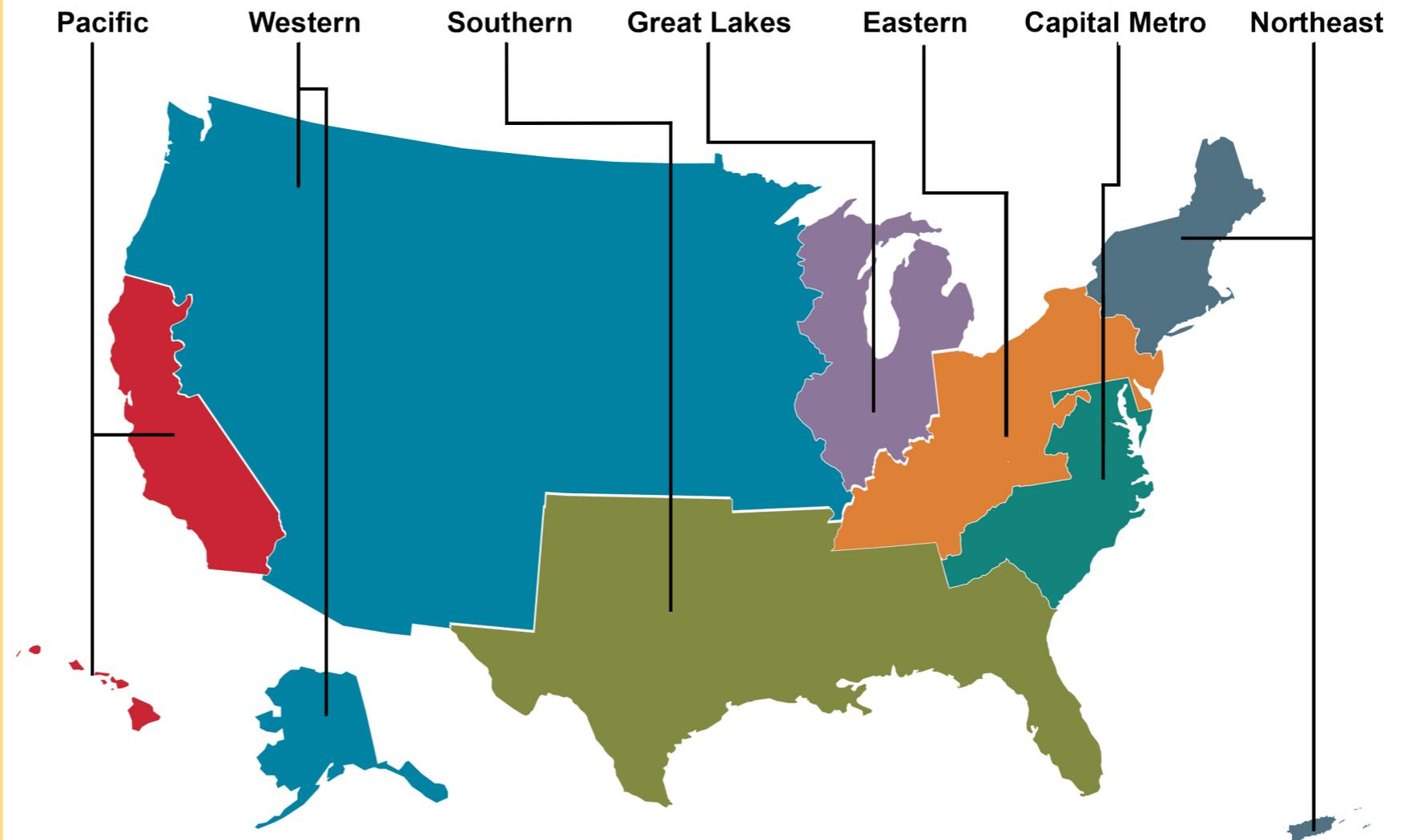
### Background

An organization's infrastructure includes laptops, servers, routers, and other IT hardware assets that support operations. These assets must be managed from the day they are acquired and throughout their lifecycle until they are retired and discarded. Hardware asset management is tracking and managing the physical components of computers and computer networks. It involves keeping records of the assets the organization has, where those assets are, and who owns them.

According to the SysAdmin, Audit, Networking, and Security Institute, "Inventory of Authorized and Unauthorized Devices" ranked first on the list of the 20 most critical security controls. This ranking highlights that the management of hardware assets is essential to responding to security events. Postal Service organizational units in physical possession of individual IT assets are responsible for the assets and records pertaining to them. Centralized asset management systems support various functions (e.g., configuration management, incident management, problem management, and service level agreements).

The Postal Service has about 31,500 facilities located in 67 districts in seven geographic areas. See Figure 2 for an illustration of Postal Service areas.

**Figure 2: Illustration of Seven Postal Service Areas**



Source: Postal Service Blue Pages.

## Objective, Scope, and Methodology

Our objective was to determine whether the Postal Service had an accurate physical inventory of hardware assets connected to the IT network (56.x.x.x network). To accomplish our objective, we judgmentally selected three district facilities (small, medium, and large facilities based on square footage) in five Postal Service areas. The Northeast and Southern areas were excluded from our scope.<sup>3</sup>

We conducted on-site enumeration scans<sup>4</sup> at each facility between February and April 2016 using Nmap<sup>5</sup> to obtain the inventory of devices on the Postal Service IT network. We evaluated 1,945 records using Perl<sup>6</sup> and MySQL.<sup>7</sup> We imported the data into Microsoft Excel and selected a sample of assets to verify. With the assistance of the Information Systems staff, we walked around each facility and physically located assets from our sample. We also interviewed personnel, analyzed and verified our results, and compared those results to Postal Service inventory. Table 1 identifies the 15 facilities we judgmentally selected.

**Table 1. Sites Selected For Review**

District	Facilities	City/State
1 Bay-Valley	Colonnade	San Jose, CA
2 Bay-Valley	Eastridge Station	San Jose, CA
3 Bay-Valley	St. James Park Station	San Jose, CA
4 Gateway	Cottleville Main Office	St. Charles, MO
5 Gateway	Saint Charles Main Office	St. Charles, MO
6 Gateway	Wentzville Carrier Annex	Wentzville, MO
7 Kentuckiana	Brooks Main Office	Bullit, KY
8 Kentuckiana	Louisville Processing & Distribution Center (P&DC)	Jefferson, KY
9 Kentuckiana	Shelby Station	Louisville, KY
10 Northern Virginia	Centreville Main Office	Centreville, VA
11 Northern Virginia	Dulles P&DC	Dulles, VA
12 Northern Virginia	Fairfax Station Post Office	Fairfax Station, VA
13 Northland	Signal Hills	St. Paul, MN
14 Northland	St. Paul Post Office	St. Paul, MN
15 Northland	Twin Cities Logistics & Distribution Center	St. Paul, MN

Source: OIG analysis.

<sup>3</sup> The Northeast area was removed from the scope because the OIG conducted a prior audit (*Hardware Inventory Management – Greater Boston District*, Report Number IT-AR-15-004, dated March 25, 2015). The Southern area was originally in our scope, but we did not visit the area after determining the Postal Service had an accurate inventory of IT assets in the other areas.

<sup>4</sup> The method used to discover devices on a network.

<sup>5</sup> Scanning tool for network discovery and security auditing.

<sup>6</sup> A script programming language.

<sup>7</sup> An open source relational database management system.

We conducted this performance audit from January through July 2016, in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

We assessed the reliability of the enumeration scans we performed by interviewing Postal Service management and physically locating the assets identified in our scans. We determined that the data was sufficiently reliable for the purposes of this report.

### **Prior Audit Coverage**

The OIG issued Hardware Inventory Management - Greater Boston District (Report Number [IT-AR-15-004](#), dated March 25, 2015), which found that management did not have an accurate inventory of hardware assets connected to the Postal Service network in the Greater Boston District. Specifically, management could not physically locate 49 of 182 active systems (27 percent) sampled at the three sites visited. The report included four recommendations. Management agreed with three recommendations and partially agreed with the other. We did not claim any monetary impact in this report.

## Appendix B: Management's Comments



June 30, 2016

SHERRY FULLWOOD  
DIRECTOR, AUDIT OPERATIONS (A)

SUBJECT: Response to Draft Report: Nationwide Hardware Inventory (IT-AR-16-DRAFT)

The objective of the subject audit was to determine if the Postal Service had an accurate physical inventory of computer hardware assets connected to the IT network. The OIG found that the Postal Service does maintain an accurate inventory of hardware assets connected to the Information Technology network. Management agrees with the finding and believes this is a reflection of continued efforts that the Postal Service has taken to improve asset identification and accountability. The OIG did not make any recommendations or monetary impact in this report, therefore management has no further comments at this time.



---

Jeffrey C. Johnson  
Vice President, Information Technology



---

Michael J. Amato  
Vice President, Engineering Systems



---

Robert Cintron  
Vice President, Network Operations

475 L'ENFANT PLAZA SW  
WASHINGTON DC 20260  
WWW.USPS.COM

PAGE 1 OF 1



Contact us via our [Hotline](#) and [FOIA](#) forms.  
Follow us on social networks.  
Stay informed.

1735 North Lynn Street  
Arlington, VA 22209-2020  
(703) 248-2100