



Audit Report



OIG-10-039

AUDIT REPORT

INFORMATION TECHNOLOGY: BPD Successfully Demonstrated
Recovery of the Authentication Services-Fiscal Services CA System

May 11, 2010

Office of
Inspector General

Department of the Treasury

Audit Report	3
Results in Brief	3
Background.....	3
Finding	4
BPD Successfully Demonstrated Disaster Recovery Capability for the Authentication Service–Fiscal Services CA System	4

Appendices

Appendix 1: Objective, Scope, and Methodology	7
Appendix 2: Management Comments	8
Appendix 3: Major Contributors	9
Appendix 4: Report Distribution.....	10

Abbreviations

BPD	Bureau of the Public Debt
CA	certificate authority
FMS	Financial Management Service

This page intentionally left blank.

*The Department of the Treasury
Office of Inspector General*

May 11, 2010

Van Zeck, Commissioner
Bureau of the Public Debt

Our overall objective for this audit was to determine if the Bureau of the Public Debt (BPD) could successfully demonstrate disaster recovery capability for the Authentication Services–Fiscal Services Certificate Authority (CA) system. To accomplish this objective, we observed the disaster recovery exercise held at BPD on January 27, 2010, and reviewed the disaster recovery documentation for the exercise.

We performed our fieldwork at BPD facilities in West Virginia on January 27, 2010. The audit was performed in accordance with generally accepted government auditing standards.¹ Our objective, scope, and methodology are described in appendix 1.

Results In Brief

We found that BPD successfully demonstrated disaster recovery capability for the Authentication Services–Fiscal Services CA system in January 2010. BPD met exercise objectives by successfully recovering the system at an alternate location, testing the functionality of the certification authority, and restoring service at the primary location.

Background

BPD’s mission is to borrow the money needed to operate the federal government, account for the resulting debt, and provide reimbursable support services to federal agencies. BPD borrows by selling Treasury bills, notes, bonds, and savings bonds. BPD pays

¹ Government Accountability Office, *Government Auditing Standards*, GAO-07-731G (July 2007).

interest to purchasers of those securities and redeems the securities when the time comes to pay back the loans. Every time BPD borrows or pays back money, it affects the outstanding debt of the United States.

To manage its programs, BPD must ensure that reliable systems and processes are in place for buying and transferring Treasury securities. As of September 30, 2009 and 2008, federal debt managed by BPD totaled about \$11.9 trillion and \$10.0 trillion, respectively, primarily for moneys borrowed to fund the government's operations. These balances consisted of approximately (1) \$7.6 trillion and \$5.8 trillion of debt held by the public as of September 30, 2009 and 2008, respectively, and (2) \$4.3 trillion and \$4.2 trillion of intragovernmental debt holdings as of September 30, 2009 and 2008, respectively. Total interest expense on federal debt managed by BPD for fiscal years 2009 and 2008 was about \$381 billion and \$454 billion, respectively. BPD is responsible for accounting for the public debt of the United States and for providing timely and accurate reports on that debt.

Through its Franchise Services, BPD offers a wide range of administrative and technology services, on a fully reimbursable basis, to many other federal agencies. The Authentication Services–Fiscal Services CA system is one of these services; it provides secure identification verification for devices and users for BPD and other subscriber organizations. The system is maintained and operated by BPD and Treasury's Financial Management Service (FMS).

Finding

BPD Successfully Demonstrated Disaster Recovery Capability for the Authentication Services–Fiscal Services CA System

BPD successfully demonstrated disaster recovery capability for the Authentication Services–Fiscal Services CA system by activating the backup system at the alternate facility within 4 hours of the simulated failure of the primary system. In addition, FMS, in coordination with BPD, conducted a functional test of the backup system and determined that user certificates could be created and managed on the backup system. Finally, BPD was able to restore services to the primary system.

During the disaster recovery exercise, two issues presented obstacles to the system administrators, which were resolved during the exercise.

- When first attempting to recover the system, BPD administrators found that the hardware key stored at the backup facility, which is necessary to start the backup system, was not functional. The administrators were able to utilize an additional backup key retrieved from offsite to continue the recovery of the system. The location and availability of the offsite key were documented in the system recovery plan.
- After the backup system was started, testing for functionality was performed remotely by an FMS administrator. During the tests, the FMS administrator encountered an error in creating a new user certificate. The BPD system administrators determined that the recovery software did not create a required directory. They manually created the directory, and the FMS administrator was able to successfully conclude functionality testing.

While onsite at BPD's alternate facility, we also performed a limited assessment of physical security controls. We found that security at the alternate facility site was adequate to protect the system.

During our review of the after-action report prepared by BPD, we noted that BPD had documented both of the issues noted above that were encountered during the disaster recovery exercise. Because neither issue prevented successful recovery and testing of the system, and recovery was completed within the required timeframe, we consider the test to be fully successful. As such, we do not have recommendations to offer at this time.

Management Response. Management agreed with the conclusions in this report with regard to its disaster recovery capability for the Authentication Services–Fiscal Services CA system. BPD's formal response is in appendix 2.

OIG Comment. We acknowledge and appreciate management's response.

* * * * *

I would like to extend my appreciation to BPD for the cooperation and courtesies extended to my staff during the review. If you have any questions, please contact me at (202) 927-5171 or Abdirahman Salah, IT Audit Manager, Office of Information Technology Audits, at (202) 927-5763. Major contributors to this report are listed in appendix 3.

/s/

Tram Jacquelyn Dang
Audit Director

Our overall objective for this audit was to determine if the Bureau of the Public Debt (BPD) could successfully demonstrate the disaster recovery capability for the Authentication Services–Fiscal Services CA system. To accomplish this objective, we reviewed the planning documentation related to the system and the specific exercise; observed the disaster recovery exercise held on January 27, 2010, at BPD’s alternate facility in West Virginia; met with the appropriate information technology personnel; and reviewed and analyzed BPD’s after-action report.

We also reviewed BPD’s adherence to applicable criteria for disaster recovery capability and demonstration of disaster recovery capability. Specifically, we reviewed the following Office of Management and Budget (OMB), National Institute of Standards and Technology (NIST), and Treasury policies, which served as criteria for our audit:

- OMB Memorandum M-09-29, “FY 2009 Reporting Instructions for the Federal Information Security Management Act and Agency Privacy Management”
- NIST Special Publication 800-53, revision 2, “Recommended Security Controls for Federal Information Systems”
- NIST Special Publication 800-34, “Contingency Planning Guide for Information Technology Systems”
- NIST Special Publication 800-84, “Guide to Test, Training, and Exercise Programs for IT Plans and Capabilities”
- Treasury Directive Publication 85-01, “Treasury Information Technology Security Program Volume 1 Unclassified Systems version 2.2.2.”

This audit was performed in accordance with generally accepted government auditing standards. These 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 objectives. This audit was included in the Office of Inspector General Annual Plan for 2010. The results of this audit may be used to support our work undertaken in accordance with the requirements of the Federal Information Security Management Act.

Appendix 2
Management Comments



DEPARTMENT OF THE TREASURY
BUREAU OF THE PUBLIC DEBT
WASHINGTON, DC 20239-0001

April 27, 2010

MEMORANDUM FOR TRAM J. DANG, AUDIT DIRECTOR
OFFICE OF THE INSPECTOR GENERAL
DEPARTMENT OF THE TREASURY

FROM: Van Zeck
Commissioner



SUBJECT: Audit of the Bureau of the Public Debt's Disaster Recovery Exercise

This memorandum is our response to your report on the audit of the Fiscal CA Disaster Recovery Exercise conducted at the Bureau of the Public Debt on January 27, 2010. We agree with your audit report's conclusions.

I am pleased the report indicates we successfully demonstrated disaster recovery capability for the Authentication Services – Fiscal Services CA system. I would also like to thank you and your staff for the professional audit and timely report and extend a special thank you to your auditors Gerald J. Steere and Abdirahman M. Salah.

www.treasurydirect.gov

Appendix 3
Major Contributors

Office of Information Technology Audits

Tram J. Dang, Director, Office of Information Technology Audit
Abdirahman M. Salah, Information Technology Audit Manager
Gerald J. Steere, Information Technology Specialist
Shiela S. Michel, Referencer

Appendix 4
Report Distribution

Bureau of the Public Debt

Commissioner

Department of the Treasury

Office of Accounting and Internal Control
Office of Strategic Planning and Performance Management
Office of the Chief Information Officer

Office of Management and Budget

Office of Inspector General Budget Examiner