Issues Submitting and Processing Change of Address Requests

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Transmittal Letter

OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

February 2, 2021

MEMORANDUM FOR: JEFFREY C. JOHNSON
VICE PRESIDENT, ENTERPRISE ANALYTICS

Margaret B. McDavid

FROM: Margaret B. McDavid
Deputy Assistant Inspector General
 for Inspection Service and Information Technology

SUBJECT: Management Alert – Issues Submitting and Processing
Change of Address Requests (Report Number 21-017-R21)

This management alert presents our review of Issues Submitting and Processing Change of Address Requests (21-017). These issues came to our attention during our ongoing Integrity of the U.S. Postal Service's Social Media Presence audit (Project Number 20-278). The objective is to provide Postal Service officials notification of the issues identified with change of address requests. These issues require immediate attention and remediation.

We appreciate the cooperation and courtesies provided by your staff. If you have questions or need additional information, please contact Mary Lloyd, Director, Information Technology, or me at 703-248-2100.

Attachment

cc: Postmaster General
     Chief Technology Officer and Executive Vice President
     Corporate Audit Response Management

Results

Introduction

During our Integrity of the U.S. Postal Service's Social Media Presence audit (Project Number 20-278), we found indications of availability issues associated with the National Change of Address (NCOA) database and its related applications. We identified several social media complaints and reports in national news concerning issues submitting and processing change of address requests. Although these issues were outside the scope of the audit, they could potentially affect millions of customers and, therefore, require immediate attention. The purpose of this alert is to bring this issue to your attention and make recommendations for corrective action.

The Postal Service processes, on average, 118,152 address changes per day. The NCOA is the database of record that stores change of address information for Postal Service customers. The NCOA system helps reduce undeliverable-as-addressed[1] mail by correcting addresses prior to mailing. Business mailers process their mailing lists using NCOALink®[2] and Postal Service customers can submit and request online address changes through the MoversGuide online application.[3]

Issues Submitting and Processing Change of Address Requests

We identified four Twitter accounts citing issues with the ability to submit an address change request using the MoversGuide online (MGO) application

between September 20-30, 2020. In addition, we identified a Twitter account that shared a news article[4] claiming the Postal Service had stopped fully updating the NCOA system for 20 days during August 2020. According to the article, the Postal Service acknowledged that it had not registered at least 1.8 million new changes of address in the NCOA database. The Postal Service spokesperson also stated that management fixed the issue and restored the missing data on September 14, 2020. The Twitter complaints and the news article prompted us to review the availability of these applications because an outage could potentially affect millions of customers.

To evaluate claims related to submitting and processing change of address requests, we reviewed the availability statistics for the MoversGuide online application using the Postal Service's ██████████[5] network performance monitoring tool and NCOA and NCOALink change requests in ██████████.

We found that availability issues existed with the MoversGuide application during August, September, and October 2020, dropping to as low as 53 percent on October 29, 2020 (see Figure 1). This indicates a possible application or supporting infrastructure[6] failure which could cause degraded service and service level agreement (SLA) violations for the MoversGuide application. For example, customers may experience application connectivity or timeout issues when accessing the MoversGuide application such as those cited by customers in the identified Twitter accounts. According to the MoversGuide SLA, this application should be available 24 hours a day, seven days a week.

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1   Mail that cannot be delivered to the name and address specified on the mailpiece and must be forwarded, returned, or treated as waste as authorized for the particular class of mail and ancillary service endorsement on the mailpiece.
2   Mailers use this service to process their mailing list through the NCOA database to determine if a change of address is on file. If a match to a change of address is found, it will update to the new address prior to mailing.
3   The moversguide.com application allows customers to file a change of address order prior to a temporary absence or permanent move on usps.com.
4   Time article "Exclusive: As States Prepared Mail-In Ballots, Postal Service Failed to Update at Least 1.8 Million Addresses," dated September 28, 2020.
5   ██████████ provides real-time monitoring, visibility, and management of Postal Service application and infrastructure environments.
6   Refers to cluster nodes which are two or more computers or systems that work together to execute applications and perform or tasks.
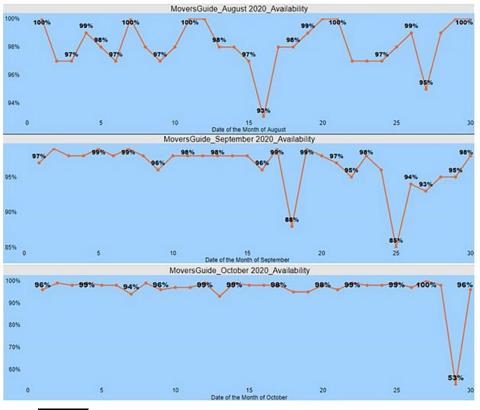
Figure 1. MoversGuide Application Status for August, September, and October 2020

Source: [redacted] Network Performance Monitoring tool.

[redacted][7] showed the Postal Service executed 10 non-maintenance window[8] change requests for the NCOA database and NCOALink between August 3 and October 28, 2020, that totaled 53 hours[9] of actual duration to complete.

The Postal Service provided an after-action report to show that management had resolved NCOALink issues. The report appeared to identify and resolve the root cause of the NCOALink availability issue on September 14, 2020. However, the issues that required non-maintenance window changes after September 14, 2020 could result in outages that affect the availability of NCOALink.

The Postal Service did not agree that there were issues related to MoversGuide availability, stating that [redacted][10] is the tool used to monitor the availability of external facing applications, not [redacted]. They provided us an after-action report and screenshots of the [redacted] tool but the documentation did not sufficiently demonstrate that [redacted] was used to monitor the availability of MoversGuide. (e.g., monitoring start date, metrics it uses or tracks, etc.). Additionally, the availability issues occurred August through October 2020; however, the Enterprise Information Repository (EIR)[11] showed [redacted] was in development status from December 8 through December 29, 2020. According to Postal Service policy, a system in development status should not be used to assess data for a production application. Finally, review of the after-action report for MoversGuide did not address the availability issues cited in the Twitter accounts.

The unavailability of applications required to process address changes may impact timely and accurate delivery of critical mail such as medical prescriptions and other parcels, bank documents, and voter registration information. This reflects poorly on the Postal Service brand and could impact customer loyalty.

Conclusion

We determined there were intermittent issues with the ability to submit and process address changes from August through October 2020. We intend to review the Postal Service's change of address process and systems in future audit work.

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7   IT service management tool for change, incident, problem, release, configuration, and service request management.
8   Knowledge Base Article, 47924, *USPS* [redacted] *New York: Change Management End User Educational Session & Recording*, February 28, 2020. Non-maintenance window changes result in an outage for the application outside any specified, scheduled maintenance window when that change is implemented.
9   We calculated the difference between the actual start and actual end dates for the change requests that were logged as non-maintenance window outages for August, September, and October 2020.
10 A tool that provides the Postal Service real-time monitoring, visibility, and management of external facing applications.
11 The official repository of information about Postal Service applications and their components and identify the status of an application (i.e., development, production, retired).

Recommendation #1
We recommend the **Vice President, Enterprise Analytics**, identify and mitigate the root cause of availability issues related to the NCOALink database.

Recommendation #2
We recommend the **Vice President, Enterprise Analytics**, identify and mitigate the root cause of availability issues related to the MoversGuide online application.

Management's Comments

Management agreed with the finding as it relates to recommendation 1 but disagreed with the finding as it relates to recommendation 2. Management agreed with recommendations 1 and 2.

Management disagreed with the OIG's analysis of the MoversGuide Online (MGO) application availability. They believe the OIG erroneously concluded MGO was not available using data from a single Postal Service monitoring tool with the tweets cited in the report. Management also stated that the MGO performance issue reported in monitoring tool on October 29, 2020 was due to scheduled maintenance. Further, management stated that they corrected a payment processing issue with a software change deployed on October 1, 2020. Finally, management challenged the validity of a customer's complaint that MGO was "offline for days at a time" in September 2020 because the monitoring tools did not support this claim.

Regarding recommendation 1, management agreed with this recommendation and stated they identified the root cause and fixed the issue related to the 1.8 million new change of address records. Therefore, management requests to close this recommendation upon issuance of this alert.

Regarding recommendation 2, management agreed with this recommendation and believes the existing protocols and processes for ensuring MGO availability are appropriate. Therefore, management requests to close this recommendation upon issuance of this alert.

See Appendix A for management's comments in their entirety.

Evaluation of Management's Comments

The OIG considers management's comments responsive to recommendation 1 and non-responsive to recommendation 2.

Regarding recommendation 1, we verified the corrective action described by management was implemented and agree to close this recommendation on issuance of this alert.

Regarding recommendation 2 and management's disagreement with the OIG's analysis of MGO availability, the OIG did not depend on tweets to demonstrate a systemic issue with MGO. Rather, as we noted in this report, the tweets, together with the news article, prompted us to review the availability of these applications because an outage could potentially affect millions of customers. Further, as documented on page 3 of this alert, management stated that a different tool used to monitor MGO availability but provided insufficient support to validate this statement. The OIG requested additional support on December 22, 2020 and followed up four times prior to receipt of management's comments. We have not yet received the requested information.

In addition, the OIG reviewed the change request for the October 29, 2020 scheduled maintenance window. The request indicated that no outage would occur, which contradicts management's statement that MGO was offline with limited customer access due to scheduled maintenance.

In addition, OIG reviewed the customer's complaint regarding MGO accessibility and found that they could not access the initial change of address screen which must be completed before the payment method screen is accessed. Further, the USPS monitoring tool data for MGO showed there was degraded availability during the weeks leading up to September 18, 2020.

We consider recommendation 1 closed with the issuance of this alert.

Recommendation 2 requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective action is complete. Recommendation 2 should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendation can be closed.

Appendix A: Management's Comments

JEFFREY C. JOHNSON
VICE PRESIDENT
ENTERPRISE ANALYTICS

UNITED STATES POSTAL SERVICE

January 25, 2020

JOSEPH E. WOLSKI
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Draft Management Alert – Issues Submitting and Processing Change of
                   Address Requests (Project Number 21-017)

Management agrees with the finding as it relates to Recommendation 1 and disagrees with
the finding as it relates to Recommendation 2 contained in this draft report.

Recommendation #1: We recommend the Vice President, Enterprise Analytics, identify and
mitigate the root cause of the availability issues relates to the NCOALink database.

Management Response/Action Plan:
Management agrees with the recommendation.

Management identified the root cause of the issue related to the event that resulted in
approximately 1.8 million new change-of-address records being suppressed from updates
distributed in the NCOA^{Link} products in the August-September release cycles. The root cause
was determined to be due to a programming change that incorrectly pointed to a test
transaction file being accessed. Management resolved the issue with the September 14th
release cycle, restoring all missing information. Management requests OIG's closure of
Recommendation 1.

Target Implementation Date:

Responsible Official:

Vice President, Enterprise Analytics

Recommendation #2: We recommend the Vice President, Enterprise Analytics, identify and
mitigate the root cause of the availability issues related to the MoversGuide online application.

Management Response/Action Plan:
Management disagrees with the analysis performed by OIG in their review of the availability of
the MoversGuide Online (MGO) application. Management believes the publication of the
Management Alert without responding to the areas of disagreement would be misleading to a
reader and diminish the confidence of the public in the stability of the change-of-address
systems. Management agrees with the recommendation to have continuous efforts that

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identify and mitigate root causes that impact availability of the MoversGuide Online application.

Management contends that the OIG is taking information derived from a single Postal Service tool that monitors the availability of application components on a highly clustered and redundant platform out of context and conflating information from this tool improperly with incidental Twitter accounts to erroneously conclude this demonstrates a systemic issue in the MGO application availability.

Within Figure 1 of the report, OIG extrapolates the conclusion that on October 29, 2020, MGO system availability dropped to as low as 53%, suggesting that this indicated that customers could only access the MGO application through the web 53% of the time on that date. Management advised OIG that on October 29th a new system was being tested in the MoversGuide Online infrastructure unrelated to the MGO application and that this had no impact on a customer's ability to access the MGO application to file a change-of-address. Management notes that there was a scheduled monthly maintenance window that resulted in MGO being offline between 8:30pm and 12:00am on this date which limited customer access, however, this was not the result of an MGO application performance issue. MGO application administrators report that there were no other alerts generated from the single monitoring tool reviewed on October 29th outside the maintenance release window that indicated the MGO application was not available or that the application was not performing within the expected response times.

OIG reports that they had identified "four Twitter accounts citing issues with the ability to submit an address change request using the MoversGuide online application between September 20-30, 2020." Management responded to the OIG with information that identified an issue was detected in the completion of the payment processing portion of the change-of-address transaction that affected a limited number of customers. The issue was corrected with a software change deployed on October 1st.

OIG provided a single Twitter report stating that on the morning of September 18th a user was unable to access the MGO application. Management notes that an issue of slow response times in the MGO application did occur on September 18th and was detected and reported by USPS monitoring to MGO application administrators. The MGO application remained accessible during the duration of the period of slow response times and customers were able to complete the entry of their change-of-address. The OIG reported that one Twitter account made the claim that the MGO application was "off-line for days at a time." Without more specific information Management challenges the validity of this claim as the monitoring tools and processing logs do not support this claim.

Management believes the existing protocols and processes for ensuring the availability of the MoversGuide Online application are appropriate and provide the necessary monitoring to facilitate timely incident response. Management considers the responses provided herein demonstrate Management has identified and mitigated root causes of MoversGuide Online application availability and requests OIG's closure of Recommendation 2.

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Target Implementation Date:

Responsible Official:

Jeffrey C. Johnson
Jeffrey C. Johnson
Vice President, Enterprise Analytics

cc: Manager, Corporate Audit Response Management

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