

Multi-Factor Authentication #22-105



The University of Texas at El Paso
Office of Auditing and Consulting

"Committed to Service, Independence and Quality"



The University of Texas at El Paso
Office of Auditing and Consulting Services

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August 29, 2020

Dr. Heather Wilson
President, The University of Texas at El Paso
Administration Building, Suite 500
El Paso, Texas 79968

Dear Dr. Wilson:

The Office of Auditing and Consulting Services has completed a limited-scope audit of Multi-Factor Authentication. During the audit, we identified opportunities for improvement and offered the corresponding recommendations in a separate management letter. We intend the recommendations will assist the department in strengthening controls and help ensure that the University's mission, goals, and objectives are achieved.

We appreciate the cooperation and assistance provided by the Information Security staff during our audit.

Sincerely,

A handwritten signature in blue ink that reads 'Lori Wertz'. The signature is fluid and cursive, with the first letters of 'Lori' and 'Wertz' being capitalized and prominent.

Lori Wertz
Chief Audit Executive

EXECUTIVE SUMMARY

The Office of Auditing and Consulting Services has completed a limited scope audit of *Multi-Factor Authentication* to determine adherence to State and University security controls and standards. Due to the confidential nature of the audit, we issued a separate management letter to the Information Security Office, which details specific findings and recommendations. These confidential results are exempt from the Texas Public Information Act under Texas Government Code §552.139.

Background

The University implemented Duo multi-factor authentication (MFA) in response to a University of Texas (UT) System directive to all UT System institutions. MFA technology strengthens user access security; even if a user's password gets compromised, a second authentication requirement would stop unauthorized users from gaining access. According to Microsoft, users who enable MFA are 99% less likely to get hacked. The University uses Duo as its MFA solution.

The audit was conducted by the Institute of Internal *Auditors' International Standards for the Professional Practice of Internal Auditing and Generally Accepted Government Auditing Standards*.

Audit Objectives and Scope

The objective of this audit was to determine if the University has implemented MFA for mission-critical information resources and if proper safeguards and configurations for the MFA solution are in place to reduce the risk of unauthorized access. The audit scope was limited to the period from September 1, 2021, to July 29, 2022.

Strengths

The Duo MFA solution implemented by the Information Security Office (ISO) has effectively protected the University's information resources. Its' ease of use and low maintenance has made it a very critical tool to protect the University from information security risks. All faculty and staff are required to use it, and the ISO has plans to roll out Duo to students in the near future.

Summary of Audit Results

| Multi-Factor Authentication | Number of Findings |
|--|--------------------|
| A. Determine if multi-factor authentication (MFA) is enabled for mission-critical systems and applications | 2 |
| B. Determine if the configuration policies and settings for multi-factor authentication (MFA) are adequate and reviewed periodically | 1 |
| C. Determine if there are safeguards in place for the multi-factor authentication (MFA) infrastructure | 1 |

Conclusion

Based on the audit procedures performed, we conclude that the Information Security Office can strengthen existing security controls by implementing the recommendations included in this memo.

We wish to thank management and staff at the Information Security Office for their assistance and cooperation throughout the audit.

Report Distribution:

University of Texas System (UT System):

System Audit Office

External:

Governor's Office of Budget, Planning and Policy

Legislative Budget Board

Internal Audit Coordinator, State Auditor's Office

Auditor Assigned to the Audit:

Ms. Victoria Morrison