Wicomico County, Maryland
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February 9, 2018

Internal Auditor's Report

The County Council and County Executive of Wicomico County, Maryland:

Pursuant to Section 305(D) of the Wicomico County Code and Council Resolution No. 106-2017, the Office of the Internal Auditor (IA) conducted a security review of the County's IT Network and Munis software. A report is submitted herewith. The purpose of the consultation was to gain an understanding of the overall security and design of the County's network.

IA conducted the consultation with due professional care, and IA planned and performed the consultation to obtain a snapshot of the effectiveness of the County's overall IT security. The consultation revealed a robust system of reporting and analysis capabilities.

IA extends our appreciation to the IT Department for their prompt and thorough participation during this process.

Respectfully submitted,

J. Stephen Roser, CPA

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Consultation Report

Background

IT security is increasingly important as more resources are maintained in digital form. Wicomico County has an internal dedicated IT support department that provides network administration and security. Munis Software provided by Tyler Technologies is the Enterprise Resource Planning (ERP) software used for financial, and HR functions throughout the County. Wicomico County has three locations that house servers as well as numerous other locations that access those servers remotely. With remote access in mind, security software and protocols to prevent unauthorized access is a high priority.

Objectives

The objectives of the consultation were to:

1. Gain an understanding of firewalls used for Munis security
2. Evaluate efficiency and effectiveness of firewalls

Scope

Objectives and methodology were adjusted as information was gathered. The Scope was open ended. We conducted observations, interviews, and inquiries with appropriate personnel.

General Highlights

Tyler Technologies provides security of the County's Munis database. The database is hosted on a dedicated server in Maine. When Wicomico County employees sign into Munis, they are actually connecting to Tyler Technologies via the internet. Wicomico County employs several different firewalls on its own servers to provide protection from hackers, and antivirus software is loaded on every individual workstation. The IT Department has taken many proactive steps to preserve the network's health and integrity.

Conclusion

Based evidence gathered and interviews performed pursuant to the Munis Security Consultation, we are of the opinion that the security protocols are at a level satisfactory[1] to the stated objectives.

Findings and Suggestions

User Accounts and Permissions

The County assigns users to groups separately in the network and in Munis. In the network, these groups provide the permissions for what files users may access, as well as the ability to log into the network remotely via virtual private network (VPN). Further, Sophos software provides limitations per workstation regarding which websites are accessible, dependent upon the group assigned to the user. Users must submit any desired changes to these permissions via an official IT Help Ticket requiring approval by the employee's supervisor.

Access to Munis is similar to the network in that there are groups of users with defined permissions. The extent of access limits users to viewing and/or editing of modules. The password for a user is separate from their network

[1] For the purposes of this audit, IA uses a three-tier grading system recommended by the International Professional Practices Framework (IPPF) as expressed by the IPPF Practice Guide issued March 2009. The three tiers are Inadequate System of Internal Control, Adequate System of Internal Control, and Satisfactory System of Internal Control. Satisfactory findings indicate that overall controls are satisfactory, although some enhancements may be recommended. It is the highest rating on the scale.

login, has complex requirements (uppercase, lowercase, special character, and numerical), and is forced to be changed every 90 days.

Munis Administration

The IT Department designated an IT support technician as the Administrator of Munis. This will allow the County to have a go-to person that will provide a more efficient service than going through a large support center. The Munis Administrator will also be able to start tapping into underutilized or unutilized modules available to users to make Munis work even better.

Firewalls and Data Protection

The County has at least two firewalls in place for each of the servers to prevent intrusions. Each workstation is equipped with antivirus software that has central reporting, alerting the IT department to any issues found during scans. The network has been setup with real time backup features. That is, any time a folder is changed; it is copied immediately to another location. Tyler Technologies hosts all Munis data and, similar to the County servers, performs backups of the data in an outside location. With any interruption of service there will be inconveniences; however, the redundancies that exist on the County systems seem to be proficient enough to keep the interruption at a minimum.

End User Knowledge

One of the best lines of defense for IT security is users that are educated in protecting their computer from intrusion. Basic best practices can go a long way in preventing avoidable issues brought on by:

- Phishing and virus schemes orchestrated through email
- Unauthorized people physically using the computer
- Setting permissions when using unsecured hotspots

The County has a procedure in place to prevent harassment in the workplace via a seminar DVD and short quiz. We suggest that management consider developing a similar protocol for IT to help employees become more knowledgeable and responsible end users.

Auditor's Closing Remark

The Wicomico County Office of the Internal Auditor would like to thank the County Council for the opportunity to attend Munis training. Additionally, special thanks go to County management and staff for their input.