



Town of Hingham, MA Cyber Security Best Practice

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EOTSS | Executive Office of Technology Services & Security



Image: World's End Reservation¹

Introduction

The Town of Hingham is a community of over 22,000 residents located in Plymouth county, Massachusetts. The Town is part of the Commonwealth's south shore region and is known for its colonial history, coastal beauty, and recreational areas. Incorporated in 1635, Hingham is home to popular parks like World's End and Bare Cove and historic gems like the Old Ship Church, which is the oldest wooden structure in the country in continuous use as a place of worship. Hingham aims to provide new opportunities and resources to residents while still preserving the Town's unique character and identity as a seaside community. In alignment with this goal, the Town of Hingham signed a Community Compact agreement with the Baker-Polito administration in April of 2017. In their Compact, the Town pledged to implement IT best practices that would protect and improve the state of their technology environment. They received Community Compact grant funds to hire a third party to perform a comprehensive cyber security assessment. This report summarizes the work that was done to complete the IT initiative.

¹ Bill Illott. "World's End, Trustees of the Reservation, Hingham, MA". Flickr. [Creative Commons License](#). Attribution-NoDerivs 2.0 Generic ([CC BY-ND 2.0](#)). Accessed on May 31, 2018. <https://bit.ly/2LLI3Cp>

Project Process

On April 20, 2017, The Town of Hingham applied for a Community Compact. Using Community Compact grant funds, the Town hired the Center for Internet Security (CIS)² to analyze their current environment, with an emphasis on network security, and make recommendations for improvement. The results of this engagement would enable the Town to mitigate any security weaknesses and help shape the Town's IT strategy. The assessment would also facilitate the sharing of cyber security best practices among IT Directors across the South Shore. The following sections contain summarized content from the assessment reports.

SECURITY ASSESSMENT

On March 7, 2018, the CIS initiated a security assessment for the Town of Hingham, where they analyzed workstations, servers, and network devices. The CIS reviewed compiled data from the test, using their Configuration and Assessment Tool (CIS-CAT) to identify operating system and network device benchmark scores based on standards for secure system installations. The CIS also collected and reviewed a number of workstation-related artifacts using its Enumeration and Scanning Program (CIS-ESP), and performed a review of Active Directory and logical access control configurations related to information management.

PENETRATION ASSESSMENT

From January 10, 2018 through January 24, 2018, the CIS performed a network and web application penetration test. During this engagement, CIS simulated a real-work computer and network exploitation (hacking) event. The penetration test took the vantage point of an attacker who possesses no knowledge of the network and technologies that comprise its infrastructure and "attack" methods were derived based on discovered information.

² Center for Internet Security: Confidence in the Connected World. <https://www.cisecurity.org/>

PHISHING ASSESSMENT

From December 4, 2017 through December 12, 2017, the CIS conducted a phishing exercise for the Town of Hingham to gauge the effectiveness of targeted cyber-attacks against the organization. During the assessment, a specially crafted email was sent from a domain impersonating a Town department and was delivered to each target employee. The email was crafted with the goal of obtaining victim credentials. This exercise was developed to demonstrate potential vulnerabilities to the organization, including the possibility of an attacker luring targeted employees to a given website that may contain malicious content. Phishing attacks are difficult to defend against as they can be highly customized and relevant to specific individuals in an organization. The best defenses for phishing attacks are having well-formed and clearly articulated communications procedures for reporting incidents, incident response policies, and periodically occurring user awareness training. With increased user awareness and education about phishing attacks, individuals can better identify suspicious messages and escalate the matter to properly trained response teams. As a result, the organization can benefit from a heightened security posture.

Conclusion

The Town of Hingham has shown tremendous commitment to achieving their Community Compact IT best practice. As a result of their engagement with CIS, Hingham is equipped with a thorough analysis of their technology environment that can help to inform future decisions around technology and security and provide insight to peer communities across the region.