Costs Associated with Mitigating Security Threats, Security Gaps, and the Data Stored on IT Systems Used by the Department of State Police

A Report to the Governor, House Appropriations Committee, and Senate Finance Committee

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August 15, 2016

TO: The Honorable Terry R. McAuliffe, Governor of Virginia

The Honorable Thomas K. Norment, Jr.
Co-Chairman of the Senate Finance Committee

The Honorable Emmett W. Hanger, Jr.
Co-Chairman of the Senate Finance Committee

The Honorable S. Chris Jones
Chairman of the House Appropriations Committee

Pursuant to the Appropriation Act, Item 476 I.2 (Regular Session, 2016), I am respectfully submitting herewith a report on the *Costs Associated with Mitigating Security Threats, Security Gaps, and the Data Stored on IT Systems Used by the Department of State Police.*

Respectfully,

W. S. Flaherty

Superintendent

WSF/KSM

Enclosure

Costs Associated with Mitigating Security Threats, Security Gaps, and the Data Stored on IT Systems Used by the Department of State Police

Overview

The Auditor of Public Accounts (APA), in an audit report for the fiscal years ending June 30, 2012 and June 30, 2013, identified two specific information technology deficiencies at the Virginia State Police (VSP):

1. Hardware/software/staffing related to Virginia Information Technology Agency (VITA)/Northrop Grumman (NG)

2. VSP's reliance on legacy technologies

In an effort to address the significant security risks identified in the APA report (http://www.apa.virginia.gov/reports/VSP_2012-13.pdf), VSP is requesting that the Department of Planning and Budget (DPB) transfer $5 million to VSP pursuant to the Appropriation Act, Item 476 I.2 (Regular Session, 2016). This funding shall be used to address unanticipated costs associated with mitigating security threats, information technology (IT) security gaps, and the data stored on IT systems used by the Department.

VSP is a non-transformed agency with unique law enforcement and Criminal Justice Services requirements. It is mutually agreed upon between VSP and the Virginia Information Technologies Agency (VITA) that at least 80% of VSP's total IT infrastructure is out-of-scope to the VITA/Northrop Grumman Partnership (VITA/NG), which causes VSP transformation to be untenable. As a result, after more than ten years of earnest efforts on the part of VSP and VITA, virtually no progress has been made with respect to transformation. This in/out-of-scope split support model creates extraordinary vulnerabilities for VSP, which were clearly articulated in the APA Report.

As noted, VSP owns and operates a vast majority of its IT infrastructure, while VITA/NG owns a fraction thereof:

VSP	VITA/NG
2 Data Centers	Commonwealth Enterprise Solutions Center (CESC) * Only applicable to transformed agencies
300+ Out-of-Scope Servers	7 servers
2,070 Mobile Data Terminals (MDT)	1,200 desktop/laptops
A myriad of network components	Limited network components

Due to VSP's unique requirements and the obvious disproportionate relationship, VSP is unable to provide effective enterprise security/support to agency assets because of the absence of essential enterprise management tools. Consequently, VSP is requesting designated funding to address these mission critical needs associated with mitigating security threats and the critical IT security gaps.

Furthermore, NG is unable to provide effective management of the VITA/NG in-scope components, because VSP is not transformed, which means that the VSP is not connected to the Commonwealth Enterprise Solutions Center (CESC), which is located in Chester, VA. The CESC is designed to house, manage, and secure enterprise infrastructure for in-scope Executive Branch Agencies. Other obstacles include inadequate VITA/NG staffing and no funding to ensure the most basic hardware/software support. It is important to note that while VSP receives little to no benefit from the CESC, VSP is compelled to pay $6.5 million per year for the VITA/NG break/fix support solution, which impacts a mere 20% of VSP's total infrastructure.

Despite oversight of only a fraction of VSP's infrastructure, NG support staffing levels are woefully inadequate; providing only two desktop support personnel for 450 users at State Police Administrative Headquarters (SPHQ) and two part-time network engineers to support the VITA/NG in-scope network components. This dynamic causes extraordinary gaps in network security/administration functions, which represents a substantial operational risk to VSP's critical systems, such as the Virginia Criminal Information Network (VCIN), the Virginia Intelligence Management System (VIMS), the Automated Fingerprint Identification System (AFIS), the Sex Offender Registry (SOR), the Motor Vehicle Inspection Program System (MVIP), the Law Enforcement Activity Management System (LEAMS), and Mental Commitments, etc. This is a small sampling of critical VSP owned systems that impact the citizens of the Commonwealth, as well as the entire law enforcement community.

The Exchange 2003 (email) infrastructure exemplifies the current state of the in-scope equipment managed by NG. The 13 year-old software is no longer fully supported by Microsoft, and the environment represents an extraordinary risk to VSP. As such, with no allocated funding, VSP is currently being billed over $1.4 million per year for extended support. VSP's requirement is to house email data on site at SPHQ to effectively address officer safety concerns, criminal investigative requirements, and criminal justice services requirements. VITA has provided a proposal to accommodate VSP's requirement at a cost of $5 million over five years in large part due to NG's storage rates. VSP represents that the transfer of the Microsoft Exchange email server to VSP will permit VSP to upgrade the environment at a cost of $870,000 over five years - a savings of $4.1 million. In addition, the new Google platform that is currently being implemented by VITA through a third party vendor does not meet the unique requirements of VSP, specifically the location of where the data is going to be stored. VITA advised that they cannot guarantee the data will stay in Virginia or even in the

USA. VSP's requirement is for the data to stay on premises at VSP due to the sensitive nature of the data.

In an effort to further mitigate these risks and vulnerabilities, VSP is in the process of decommissioning legacy applications/technologies. While progress has been made, the absence of dedicated funding continues to pose considerable risks to the deteriorating IT infrastructure, which negatively impacts VSP operations and its ability to serve the criminal justice community and the citizens of the Commonwealth.

In order to address the findings outlined in the APA report, the following table provides the area of concern, immediate funding requirements, and future recurring costs. As evident herein, the $5 million will remediate the majority of the APA findings, however the funding is not enough to address all critical IT concerns, nor does it address ongoing annual costs, future full-time equivalent positions (FTEs), or funding required for the VSP and VITA separation. As the APA report noted, "*Regardless of the chosen solution, State Police will need to dedicate significant resources to be able to adequately manage and maintain its IT environment going forward*."

Qualified Risk Expenditures

Area of Concern	Requested Funding	Ongoing Annual Costs
Exchange and Active Directory APA Finding: "… **discontinued vendor product lines** cannot depen on support from the vendor i the case of a system failure. Further, it becomes **increasingly expensive to maintain** software with limite support by the original vendo	$500,000	• $50,000 • 1 FTE - $130,000
Enterprise security and management hardware an software APA Finding: "In its current state, State Police **does not have the staff, hardware, or softwar to adequately secure the data** that the agency is charged with protecting.	$2,440,000	$445,000

Replacement of legacy applications/functions APA Finding: "State Police continues to rel on **outdated legacy databas technologies to support** applications that contain **sensitive data...** In its curren state, the legacy architecture has not been fully supported the vendor since 2008, and cannot be kept up-to-date…"	$2,060,000	$0
Total	$5,000,000	$625,000

There is no alternative to replacing the outdated legacy systems/applications. This conversion must be completed in order to become compliant with VITA's Enterprise Architecture and Security Standards, as well to address the critical risks associated with unsupported technologies.

VSP and VITA agree that the current state of affairs is conflicted and presents an unsecure IT environment. In the interim, self-management ensures that the APA's findings and VSP's unique legal and federal requirements are addressed in a fiscally responsible and common sense manner. This dynamic is further complicated due to the fact that Virginia law requires the Superintendent to retain control over VCIN, which includes many of VSP's mission critical applications. Lastly, this dysfunctional relationship appears to be unique to Virginia, as no other state has this type of a three party arrangement (VSP/VITA/NG) for their state law enforcement IT solution.

Conclusion

VSP remains vulnerable and non-compliant with the APA audit report. After 10 years of exhausting negotiations it has become apparent that VSP must be able to effectively address its security risks. This funding request would allow VSP to secure the vast majority of its IT infrastructure as identified in the APA report. Additionally, the enterprise management tools secured through the use of this funding will not only address the immediate mission critical vulnerabilities, they will continue be a vital part of VSP's core infrastructure.