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Overview of Security 2016 Presidential Gener	
Why this overview?	
The New York Times	
Sowing Doubt Is Seen as Prime	Danger in Hacking Voting System
By DAVID E. SANGER and CHARLIE SAVAGE SEPT. 14, 2016	
	hackers targeted Arizona election THE BALTIMORE SUN FBI warns state elections officials about
Hacker demonstrates how voting machines can be compromised	hacking attempts POLITICO VERSECURIT Elections security: Federal help or power grab? Store state election officials say offers to aid the fight against hackers could lead to Washington taking greater control. By ERIC GELLER 102/24/6 07:04 MED
NSA Chief: Potential Russia U.S. Elections a Concern	an Hacking of Continue voting next side

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### What happened?

August 2016: FBI releases flash alert after voter data on state websites hacked in Illinois and Arizona

Incident: Identity theft. Not vote theft.



# Targeting Activity Against State Board of Election Systems

#### Summary

The FBI received information of an additional IP address, 5.149.249.172, which was detected in the July 2016 compromise of a state's Board of Election Web site. Additionally, in August 2016 attempted intrusion activities into another state's Board of Election system identified the IP address, 185.104.9.39 used in the aforementioned compromise.

#### **Technical Details**

The following information was released by the MS-ISAC on 1 August 2016, which was derived through the course of the investigation.

In late June 2016, an unknown actor scanned a state' for vulnerabilities using Acunetix, and after identifyin Language (SQL) injection (SQLi) vulnerability, used SQ website. The majority of the data exfiltration occurre



### What happened?

August 2016:

Department of Homeland Security holds call with state election officials, considers designating certain election systems as 'critical infrastructure'

During today's call. Secretary Johnson offered assistance in helping state officials manage risks to voting systems in each state's jurisdiction. While DHS is not aware of any specific or credible cybersecurity threats relating to the upcoming general election systems, Secretary Johnson reiterated that DHS, the Election Assistance Commission, NIST, and DOJ are available to offer support and assistance in protecting against cyber attacks. He also recognized the important work already being done in the states to ensure the integrity and security of the nation's elections. Secretary Johnson further emphasized that DHS is exploring all ways to deliver more support to the sector in a collaborative and non-prescriptive manner, and would be examining whether designating certain electoral systems as critical infrastructure secretary also announced that DHS is convening a would be an effective way to offer this support.

August 15, 2016

Press Release

Contact: DHS Press Office (202) 282-8010 READOUT OF SECRETARY JOHNSON'S CALL WITH STATE ELECTION

OFFICIALS ON CYBERSECURITY Today, Secretary of Homeland Security Jeh Johnson hosted a phone call with members of

the National Association of Secretaries of State (NASS) and other Chief Election Officials to discuss the cybersecurity of the election infrastructure. It is critically important to continue to

e of our electoral infrastructure, particularly as the risk om the U.S. Election Assistance Commission, the titute for Standards and Technology (NIST), and the pated in the call

unson offered assistance in helping state officials tate's jurisdiction. While DHS is not aware of any relating to the upcoming general election syst he Election Assistance Commission, NIST, and DOJ are in protecting against cyber attacks. He also recognized 1 the states to ensure the integrity and security of the ther emphasized that DHS is exploring all ways to Ilaborative and non-prescriptive manner, and would be lectoral systems as critical infrastructure would be an

on Campaign with experts from all levels of governmen of cybersecurity risks potentially affecting voting nd resilience of the electoral process. Representatives of the National Association of Secretaries of State were invited to join this group to provide their

expertise and input. Secretary Johnson encouraged state officials to focus on implementing existing

As part of the ongoing effort, the Secretary also announced that DHS is convening a Voting Infrastructure Cybersecurity Action Campaign with experts from all levels of government and the private sector to raise awareness of cybersecurity risks potentially affecting voting infrastructure and promote the security and resilience of the electoral process. Representatives of the National Association of Secretaries of State were invited to join this group to provide their expertise and input.



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### Online voter registration

- ✓ OLVR a state system; county employees have no access
- ✓ OLVR data manually reviewed before entered into MDVOTERS
- $\checkmark$  As with any state database, cybersecurity protocols a state responsibility

### Voter registration

- ✓ MDVOTERS also a state system; county employees have limited user access privileges
- ✓ Password security
- ✓ Paper records secured behind badge-entry doors
- ✓ Cancelled records flagged but <u>not</u> deleted
- Copies of data secured in electronic pollbook using numerically logged and verified tamper-evident seals
- ✓ Logic and accuracy testing
- ✓ Election Judges verify seals on Integrity Reports





### Security of county systems

- ✓ Department of Technology Services responsible for numerous gov databases
- ✓ All employees required to complete mandatory online training about information security protocols
- ✓ Employees have tiers of access to electronic records
- ✓ Paper records secured behind badge-entry doors

### Voting equipment

- ✓ Federally certified voting system (ES&S EVS 5.2.0.3)
- Dedicated workstations in secure server room used only for certified purposes (not even used for election night reporting)
- Election media secured in scanner using numerically logged and verified tamper-evident seals
- $\checkmark\,$  Data encrypted and digitally signed
- ✓ Logic and accuracy testing
- ✓ Election Judges verify seals on Integrity Reports





### The good news (?)

# THE WALL STREET JOURNAL.

POLITICS | NATIONAL SECURITY

U.S. Voting System So 'Clunky' It Is Insulated From Hacking, FBI Director Says

James Comey points to system's dispersal over 50 states, no centralized computer system



FBI Director James Comey, shown at a conference in July, on Thursday said the U.S. voting system would be hard to hack into because its so clunky and dispersed. PHOTO: BEBETO MATTHEWS/ASSOCIATED PRESS







Public demonstration of logic & accuracy testing for the 2016 presidential primary election (April 8, 2016)



#### **Overview of Security Procedures** 2016 Presidential General Election Electronic Pollbook Integrity Report State of Maryland **Electronic Pollbook Integrity Report** District/Precinct: County: Montgomery Date: November 8, 2016 Judges must: Complete the Opening section below. Remember to print and sign the Zero Reports from each pollbook and attach them to this form BEFORE the polls open. The inner seal is the memory card lid door seal on top of pollbook. Do not remove unless directed by Board of Election staff. If necessary, verify and record information about having to remove the Inner Seal during the day. Complete the Closing section. Remember to print and sign the Totals Report from one pollbook and attach it to this form. Remember: Chief Judges must sign this form AFTER the polls close. OPENING DURING CLOSING 2 3 4 5 7 1 6 State Asset Verify that inner Outer Seal # Inner Seal # If Inner Seal was removed New Outer Seal # New Inner Pollbook Tag # seal was intact (on outside of (on top lid of (applied to storage during the day, please record ID # (on back of Seal # when polls opened storage case) pollbook) case at closing) reason here. If more room is pollbook) (initial) needed use back of this page. VERIFY - DO NOT REP/ VERIFY DEM RECORD RECORD VERIFY RECORD REMOVE OTH 1 2 3 4 5 6



To the best of our knowledge the information on this report is true and correct.

Election Judge who completed this report

Election Judge who completed this report

CHIEF JUDGE

CHIEF JUDGE 8/18/2016 At the end of the election, return to the Chief binder Check-In (



#### Scanning Unit Integrity Report

SCANNING UNIT INTEGRITY REPORT OPENING ELECTION DAY 2016 Primary/General Election

County: Montgomery

District/Precinct\_\_\_\_\_

Date: November 8, 2016

The Scanning Unit automatically prints two reports when powered on. To print a third report, see instructions in the Scanning Unit opening procedures. Place the first report in the RED bank bag and the second report in the BLACK bank bag; post the third report for public viewing. Column letters refer to illustrations on page two.

Remember: Record the reason for removing ANY tamper tape or seal after opening and prior to closing the polls on the "Tamper Tape/Security Seal Removal Report" and place removed tamper tape on the back. COMPLETE ALL GREY AREAS MONDAY – Complete A. F. G. L. J. TUESDAY Complete B. C. D. F. H. K. J.

		<b>MONDATI</b> COM		SDAT Complete B, C	, D, I, II, IX, E.	
	Α.	В.	C.	D.	Ε.	F.
Coopping	Monday	Tuesday	Tuesday	Tuesday	Monday	Tuesday
Scanning	-	-	Rear Access Door	Front Access Door	-	-
Unit	Scanning Unit	Scanning Unit	Tamper Tape #	Tamper Tape #	Main Ballot Box	New Main Ballot
#	Lid Seal #	Serial #	(Do Not Remove)	(Do Not Remove)	Seal #	Box Seal #
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-						
2						

	G.	H.	Ι.	J.	K.	L.
Scanning	Monday	Tuesday	Monday	Monday	Tuesday	Tuesday
Unit	Emergency Ballot	New Emergency		_	_	-
#	Compartment	Ballot Compartment	Left Case Seal #	Right Case Seal #		Protected
#	Seal #	Seal #	(Do Not Remove)	(Do Not Remove)	Public Count	Count
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To the best of our knowledge, the information on this report is true and accurate.

Assisting Judge(s): \_\_\_\_

Chief Judge: \_\_\_\_\_





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СС	Inn	ing l	Jnit lı	ntegri	ity F	Re	oort			
				G UNIT INTEGRI Presidential Elec						
County:	Montgom	ery		rict/Precinct:				ate: No	vember 8, 2016	
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Chief Judge: \_\_

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\_Chief Judge: \_

8/3/2016 At end of election, return to Chief binder

Continue voting next side



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							Procedures
S	ec	urit		al R	emov	/al	Report
			,				State of Maryland EMOVAL REPORT- 2016 Presidential General
		mation abou	_	eplacement of	trict/Precinct:		Date: <u>November 8, 2016</u> ccurs after the polls open and before the polls close.
	Scanning Unit or BMD Unit #	Equip. Code # (see below)	Removed Tamper Tape or Seal #	Time of Removal	New Tamper Tape or Seal #	Judges' Initials	Reason for removing tamper tape or security seal during the day. Use back of page if more space is needed.
	Equipment A = Scanning		ccess door			E = Left side	Ballot Transfer Bin top



- ng C = Scanning Unit main ballot box
- D = Scanning Unit emergency ballot compartment

ugi G = Ballot Marking Device

Chief Judge: \_\_\_\_\_ Chief Judge:

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8/02/2016 At end of the election, return to the Chief Binder.



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Overview of Security Procedures 2016 Presidential General Election
Security Seal Removal Report
State of Maryland VOTING EQUIPMENT TAMPER TAPE/SECURITY SEAL REMOVAL REPORT- 2016 Presidential General
Continue voting next side

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### Ballot Bin Chain of Custody Form



Board of Elections – Presidential Election November 8, 2016 Precinct Chain of Custody Form, VOP-D Blue Ballot Transfer Bins

District/Precinct: \_\_\_\_\_/\_\_\_\_

Blue Ballot Transport Bin #1 is sealed with Seal #s:

Blue Ballot Transport Bin #2 is sealed with Seal #s:

Blue Ballot Transport Bin #3 is sealed with Seal #s:

Blue Ballot Transport Bin #4 is sealed with Seal #s:

Relinquished By:

Chief Judge

Received By:

VOP-D

Time Received by VOP-D

Chief Judge

Time Received by BOE: \_\_\_\_\_\_ Ballot Transport Bins received and seals verified by:

Pink copy to Chiefs. Yellow copy to VOP.D. Keep form easily accessible in - hand. Hand to BOE official during Election Night drop - off. BOE will retain original and return yellow copy to VOP-D. 8/3/2016





### Media Results Chain of Custody Form



Board of Elections – Presidential Election November 8, 2016 Precinct Chain of Custody Form – VOP-D Black Memory Stick Security Bag – Rear Memory Stick

#### District/Precinct:

**Critical Materials** 

Black Memory Stick Security Bag Red Seal Number \_\_\_\_\_

Rear Memory Stick – Scanner 1 Serial Number

Rear Memory Stick – Scanner 2 Serial Number

Results Tape -- Scanner 1

Results Tape -- Scanner 2

Leave with Black Memory Stick Security Bag as soon as practicable. Go directly to BOE-assigned location accepting Memory Sticks.

Relinquished By:

Chief Judge

Chief Judge

Received By:

Voting Operations Judge Driver (VOP-D)

Time Received by VOP-D

Time Received by BOE: \_\_\_\_\_\_ Memory Stick and Results Tape received and Black Bag Seal verified by:

Pink copy to Chiefs. Yellow copy to VOP-D.

VOP.D: Keep form easily accessible in - hand. Hand to BOE official during Election Night drop off. BOE will retain original and return yellow copy to VOP-D.





### BOE Chain of Custody Form



Board of Elections – Presidential Primary Election November 8, 2016 Precinct Chain of Custody Form – Closing Judges Red Memory Stick Security Bag and Other Critical Materials

Critical Materials	
Red Memory Stick Security Bag (Red Sea Memory Stick (s) from each Scanning U Memory Stick 1 serial number Memory Stick 2 serial number Results Tape(s) from Scanning Unit(s) Keys, passwords, remaining security s Total number of Pollbooks Number of sets of power bricks and cords. Orange (locked) Provisional Voted Ballot T Orange Provisional Ballot Supply Bag	Unit(s), front compartment
(Red Red Chief Bag (Red Seal Number) • Sorted and counted VACs in VAC boxes • Red Document Folder (Includes Payroll's	s sheet, Electronic Pollbook Integrity Report, Ballot Certificate, illy Sheet, Scanning Unit Integrity Reports, BMD Integrity IAC Worksheet)
Non-Critical Materials	
Printer Case(s) (Includes Printers, Power brick Green Supply Bag Blue Signage Bag	s/cords, Hubs and USB cables)
Refer to "Closing the Polls" sections of the Red Bag	and Document Jacket Checklists for complete list of content
Relinquished By:	
Chief Judge	Chief Judge
Received By:	• 

Pink copy to Chief. Yellow copy to Closers.

Closers: Keep form easily accessible in - hand. Hand to BOE official during Election Night drop off. BOE will retain original and return yellow copy to CLOSERS. 8/17/2016





### **Election Day**

- ✓ Coordination w/MCPD, OEMHS
  - ✓ Police officer in call center
  - Emergency Operations Center
- ✓ Chiefs have facility security plan
  - ✓ Call 911 <u>first</u>, then BOE
  - ✓ Retrieve what you can
- ✓ Paper ballots
- Emergency paper pollbooks
- ✓ Emergency bin
- ✓ Federal resources in event of a cyberattack: Linda Lamone serves on Technical Guidelines
  Development Committee @ EAC/NIST for information, see www.eac.gov







#### Post-Election Audit

Maryland State Board of Elections

Comprehensive Audit Guidelines Revised: March 2016

[The <u>purpose</u> of the Comprehensive Audit is ensure that local boards of elections are adequately performing tasks as required by election law and State regulations (COMAR). The <u>goal</u> of the Comprehensive Audit is to ensure fair and accessible elections for all voters and to protect the integrity of the election process.

This document describes the topics and areas of inquiry that staff members at the State Board of Elections (SBE) will investigate when conducting comprehensive audits on each of the local boards of elections (local board). After each election, SBE will send an Audit Report to each local board. Findings from inquiries will determine local boards' compliance with election laws and regulations prior to and following elections.

SBE's audits will be conducted through reviews of data and information available through state databases or through required submissions of information by local boards. In addition, SBE staff members may visit local boards offices to inspect records, observe office operations, observe voting equipment testing, and attend and evaluate election judges' training.

There are four topics with areas of inquiry under each topic.

- 1. Voting System
- A. Logic and Accuracy testing
- B. Voting unit and electronic pollbook allocation
- C. On-time opening of the polls
- D. Voting System Verification
- E. Issuance of "offline" provisional ballots
- 2. Voter Registration
  - A. Pending Records
  - B. Back Dating VRAs
  - C. NVRA List Maintenance
  - D. Ongoing Voter Registration Activities\*
  - 1) Removal of deceased voters
  - 2) Removal of voters with a felony conviction
  - 3) List maintenance Inactivation of voters
  - 4) List maintenance Removal of inactive voters
  - 5) Processing of ERIC reports
  - \* SBE's finding from ongoing activities will be included in the Comprehensive Audit Report as a summary of findings.
- 3. Polling Place Operations
- A. Election judge training
- B. Polling place evaluation program
- C. Accessibility
- D. Ballot accounting

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Questions?	Be su	ire to	END O review y	F BALLO your ba		ections
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