Overview of Security Procedures

2016 Presidential General Election

September 19, 2016
Overview of Security Procedures

2016 Presidential General Election

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  SEP'T 14, 2016

The Washington Post
Russian hackers targeted Arizona election system

CBS THIS MORNING
Hacker demonstrates how voting machines can be compromised

CBS THIS MORNING

NSA Chief: Potential Russian Hacking of U.S. Elections a Concern
by JIM MIKLASEWSKI and HALEMAH ABDULLAH

THE BALTIMORE SUN
FBI warns state elections officials about hacking attempts

POLITICO

Elections security: Federal help or power grab?
Some state election officials say offers to aid the fight against hackers could lead to Washington taking greater control
By ERIC GELLER | ORIOGEN 07/05 AM EDT

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2016 Presidential General Election

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’s website detecting vulnerabilities on its Windows server. After identifying these vulnerabilities, the unknown actor launched a SQL injection attack against the vulnerable website. The majority of the data exfiltration occurred during this period.
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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 would be an effective way to offer this support.

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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Maryland “already prepared”

Maryland officials said they are already prepared to fight off the type of attack the FBI warned about.

The hack in Illinois marked the first confirmation that such a breach could be executed successfully, said Nikki Baines Charlson, deputy administrator of the Maryland Board of Elections.

"This is the type of activity we watch for," she said. She said the state has deployed the type of cybersecurity needed to fend off such threats.

Baltimore Sun, “FBI warns state elections officials about hacking attempts” (August 29, 2016)
### Overview of Security Procedures

#### 2016 Presidential General Election

<table>
<thead>
<tr>
<th>Online voter registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ OLVR a state system; county employees have no access</td>
</tr>
<tr>
<td>✓ OLVR data manually reviewed before entered into MDVOTERS</td>
</tr>
<tr>
<td>✓ As with any state database, cybersecurity protocols a state responsibility</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voter registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ MDVOTERS also a state system; county employees have limited user access privileges</td>
</tr>
<tr>
<td>✓ Password security</td>
</tr>
<tr>
<td>✓ Paper records secured behind badge-entry doors</td>
</tr>
<tr>
<td>✓ Cancelled records flagged but not deleted</td>
</tr>
<tr>
<td>✓ Copies of data secured in electronic pollbook using numerically logged and verified tamper-evident seals</td>
</tr>
<tr>
<td>✓ Logic and accuracy testing</td>
</tr>
<tr>
<td>✓ Election Judges verify seals on Integrity Reports</td>
</tr>
</tbody>
</table>
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2016 Presidential General Election

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
✓ Data encrypted and digitally signed
✓ Logic and accuracy testing
✓ Election Judges verify seals on Integrity Reports

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2016 Presidential General Election

The good news (?)

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 it's so clunky and dispersed. PHOTO: BETH J. MATTHEWS/ASSOCIATED PRESS

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2016 Presidential General Election

Votes not connected to the Internet

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

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## Overview of Security Procedures

**2016 Presidential General Election**

### Electronic Pollbook Integrity Report

#### State of Maryland

**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.

<table>
<thead>
<tr>
<th>Pollbook ID #</th>
<th>OPENING</th>
<th>DURING</th>
<th>CLOSING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Outer Seal #</td>
<td>VERIFY</td>
<td>VERIFY</td>
<td>VERIFY - DO NOT REMOVE</td>
</tr>
<tr>
<td>(on outside of</td>
<td></td>
<td></td>
<td>REPI/ OTH</td>
</tr>
<tr>
<td>storage case)</td>
<td></td>
<td></td>
<td>DEM</td>
</tr>
<tr>
<td>State Asset</td>
<td>RECORD</td>
<td>RECORD</td>
<td>RECORD</td>
</tr>
<tr>
<td>Tag # (on top of pollbook)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inner Seal #</td>
<td>RECORD</td>
<td>RECORD</td>
<td>RECORD</td>
</tr>
<tr>
<td>(on top lid of pollbook)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verify that inner seal was intact when polls opened (initial)</td>
<td>RECORD</td>
<td>RECORD</td>
<td>RECORD</td>
</tr>
<tr>
<td>If Inner Seal was removed during the day, please record reason here. If more room is needed use back of this page</td>
<td>RECORD</td>
<td>RECORD</td>
<td>RECORD</td>
</tr>
<tr>
<td>New Inner Seal #</td>
<td>RECORD</td>
<td>RECORD</td>
<td>RECORD</td>
</tr>
<tr>
<td>New Outer Seal #</td>
<td>RECORD</td>
<td>RECORD</td>
<td>RECORD</td>
</tr>
<tr>
<td>(applied to storage case at closing)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**

8/18/2016

At the end of the election, return to the Chief binder

Check-In
Overview of Security Procedures

2016 Presidential General Election

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


<table>
<thead>
<tr>
<th>Scanning Unit #</th>
<th>A. Monday Scanning Unit Lid Seal #</th>
<th>B. Tuesday Scanning Unit Serial #</th>
<th>C. Tuesday Rear Access Door Tamper Tape # (Do Not Remove)</th>
<th>D. Tuesday Front Access Door Tamper Tape # (Do Not Remove)</th>
<th>E. Monday Main Ballot Box Seal #</th>
<th>F. Tuesday New Main Ballot Box Seal #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Verify</td>
<td>Verify</td>
<td>Verify</td>
<td>Verify</td>
<td>Verify</td>
<td>Record</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scanning Unit #</th>
<th>G. Monday Emergency Ballot Compartment Seal #</th>
<th>H. Tuesday New Emergency Ballot Compartment Seal #</th>
<th>I. Monday Left Case Seal # (Do Not Remove)</th>
<th>J. Monday Right Case Seal # (Do Not Remove)</th>
<th>K. Tuesday Public Count</th>
<th>L. Tuesday Protected Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Verify</td>
<td>Record</td>
<td>Verify</td>
<td>Verify</td>
<td>Verify</td>
<td>Verify</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
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</tbody>
</table>

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

Assisting Judge(s): ____________________________

Chief Judge: ____________________________

8/2/2016

At end of the election, return to the Chief Bir
Overview of Security Procedures

2016 Presidential General Election

Scanning Unit Integrity Report

Scanning Unit – Opening Tamper Tape & Security Seal Location Diagram

A = Ballot Box Lid Seal
B = Scanning Unit Serial Number
C = Rear Access Door Tamper Tape (Do Not Remove)
D = Front Access Door Tamper Tape (Do Not Remove)
E = Main Ballot Box Seal
F = New Main Ballot Box Seal
G = Emergency Ballot Compartment Seal
H = New Emergency Ballot Compartment Seal
I = Left Case Seal (Do Not Remove)
J = Right Case Seal (Do Not Remove)
K = Public Count
L = Protected Count

Continue voting next side
## Overview of Security Procedures
### 2016 Presidential General Election

### Scanning Unit Integrity Report

**SCANNING UNIT INTEGRITY REPORT – CLOSING**

**2016 Presidential Election → Election Day**

- **County:** Montgomery
- **District/Precinct:** __________/__________
- **Date:** November 8, 2016

1. Place removed tamper tape on the back of this form.
2. Three reports are needed. Two, are automatically printed when Scanning Unit is closed and powered off. The third report is generated following instructions in the Scanning Unit closing procedures. The first report goes in the RED bank bag, the second report goes in the BLACK bank bag, and the third report is posted for public viewing. **COMPLETE ALL GREY AREAS AS NEEDED FOR EACH SCANNER.**

<table>
<thead>
<tr>
<th>Unit #</th>
<th>A. Removed Emergency Ballot Compartment Seal #</th>
<th>B. Public Count</th>
<th>C. Protected Count</th>
<th>D. Number of VACs</th>
<th>E. Removed Rear Access Door Tamper Tape #</th>
<th>F. Removed Front Access Door Tamper Tape #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Record</td>
<td>Record</td>
<td>Record</td>
<td>Record</td>
<td>Record</td>
<td>Record</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
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</tbody>
</table>

For two Scanning Units, add Boxes 1B and 2B for total public count. Enter circled number on Closing Summary Report Line 4

<table>
<thead>
<tr>
<th>Unit #</th>
<th>G. Memory Stick Serial #s</th>
<th>H. New Scanning Unit Lid Seal #</th>
<th>I. Removed Main Ballot Box Security Seal/Lock #</th>
<th>J. Security seal # on Ballot Transfer Bin - Front</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Verify</td>
<td>Record</td>
<td>Record</td>
<td>Record</td>
</tr>
<tr>
<td>2</td>
<td>Main</td>
<td></td>
<td>Record</td>
<td>Record</td>
</tr>
</tbody>
</table>

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

**Assisting Judge(s):**

**Chief Judge:**

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

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## Security Seal Removal Report

**State of Maryland**

**VOTING EQUIPMENT TAMPER TAPE/SECURITY SEAL REMOVAL REPORT – 2016 Presidential General Election**

**County:** Montgomery  
**District/Precinct:** ________ / ________  
**Date:** November 8, 2016

Record information about the removal and replacement of tamper tape or security seals that occurs after the polls open and before the polls close. Place removed tamper tapes on back of this form.

<table>
<thead>
<tr>
<th>Scanning Unit or BMD Unit #</th>
<th>Equip. Code # (see below)</th>
<th>Removed Tamper Tape or Seal #</th>
<th>Time of Removal</th>
<th>New Tamper Tape or Seal #</th>
<th>Judges' Initials</th>
<th>Reason for removing tamper tape or security seal during the day. Use back of page if more space is needed.</th>
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<tbody>
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</tbody>
</table>

**Equipment Code:**

A = Scanning Unit front access door  
B = Scanning Unit rear access door  
C = Scanning Unit main ballot box  
D = Scanning Unit emergency ballot compartment  
E = Left side Ballot Transfer Bin top  
F = Right side Ballot Transfer Bin top  
G = Ballot Marking Device

Chief Judge: ___________________________  
Chief Judge: ___________________________  
8/03/2016  
At end of the election, return to the Chief Binder.  
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2016 Presidential General Election

Security Seal Removal Report

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2016 Presidential General Election

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 #:

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

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

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

Relinquished By:

__________________________  __________________________
Chief Judge                  Chief Judge

Received By:

__________________________  __________________________
VOP-D                      Time Received by VOP-D

Time Received by BOE:

Ballot Transport Bins received and sealed verified by:

Pink copy to Chief. Yellow copy to VOP-D.
Keep form easily accessible in hands. Hand to BOE official during Election Night drop-off. BOE will retain original and return yellow copy to VOP-D.
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2016 Presidential General Election

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.

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## Overview of Security Procedures

### 2016 Presidential General Election

#### 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**

**District-Precinct:**

<table>
<thead>
<tr>
<th>Critical Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Memory Stick Security Bag (Red Seal Number)</td>
</tr>
<tr>
<td>Memory Stick(s) from each Scanning Unit(s), front compartment</td>
</tr>
<tr>
<td>Memory Stick 1 serial number</td>
</tr>
<tr>
<td>Memory Stick 2 serial number</td>
</tr>
<tr>
<td>Results Tape(s) from Scanning Unit(s)</td>
</tr>
<tr>
<td>Keys, passcodes, remaining security seals/tape</td>
</tr>
<tr>
<td>Total number of Pollbooks</td>
</tr>
<tr>
<td>Number of sets of power plugs and cords</td>
</tr>
<tr>
<td>Orange (locked) Provisional Voted Ballot Transfer Bag(s)</td>
</tr>
<tr>
<td>Orange Provisional Ballot Supply Bag (Red Seal Number) Bag 1: Bag 2:</td>
</tr>
</tbody>
</table>

**Red Chief Bag (Red Seal Number) includes the items below:**

- Sorted and counted VACS in VAC boxes
- Red Document Folder (Includes: Payroll Sheet, Electronic Pollbook Integrity Report, Ballot Certificate, Provisional Ballot Certificates and Tally Sheet, Scanning Unit Integrity Reports, BMD Integrity Reports, Closing Summary Report VAC Worksheet)
- Document Jacket (Browne Accordian Folder)
- Extended Hours Envelope (unopened)

**Non-Critical Materials**

- Printer Case(s) (Includes Printer, Power brick/ cords, Hubs and USB cables)
- Green Supply Bag
- Blue Signage Bag

Refer to “Closing the Polls” sections of the Red Bag and Document Jacket Checklists for complete list of contents.

**Relinquished By:**

| Chief Judge | Chief Judge |

**Received By:**

| Closing Judge | Closing Judge |

**Time Received by BOE:**

Memory Stick and Results Tape received and Red Security Bag Seal verified by:

---

Print copy to Chief. Yellow copy to Closer.

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

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Overview of Security Procedures

2016 Presidential General Election

Election Day

- Coordination w/MCPD, OEMHS
  - Police officer in call center
  - Emergency Operations Center

- Chiefs have facility security plan
  - Call 911 first, 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

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Overview of Security Procedures

2016 Presidential General Election

Post-Election Audit

The purpose of the Comprehensive Audit is to ensure that local boards of elections are adequately performing tasks as required by election law and State regulations (COMAR). The aim 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 (LBOs). 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-line opening of the polls
   D. Voting System Verification
   E. Issuance of "offline" provisional ballots

2. Voter Registration
   A. Pending Records
   B. Back Dated 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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END OF BALLOT

Be sure to review your ballot selections

Questions?