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Elections Security Checklist

| Identify and Assess Critical Election Systems | |
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| 1.) Have you defined your inventory of critical election systems? <i>(for example, the Voter Registration Database; Websites like your Voter Data Lookup Tool; Election Tally System; Voting Machines, etc.)</i> | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) For each system, do you regularly assess the value of the information contained within, the necessity of perfect functioning of the system, and potential risks to it? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) For each system, are you actively cataloging it and building/improving defenses to protect it? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 4.) For each system, have you developed a plan to recover should disaster strike? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| For each system identified, engage in the following critical analysis to assess the relative risks, defenses, and recovery plans you have in place. | |
| I. Risk Assessment (Complete a Risk Assessment for every system) | |
| A. Physical Security Risk | |
| 1.) Have you developed a worst case scenario for potential damage if an unauthorized person enters your election headquarters? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Have you developed a worst case scenario for potential damage if an unauthorized person enters your election warehouse? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Have you developed a worst case scenario for potential damage if an unauthorized person enters your server room or data center? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 4.) Have you examined your physical access authorization policy in the last three months? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5.) Do you perform scheduled audits of authorized personnel prior to each election? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 6.) Do you reexamine your physical access policies on any regular schedule? | <input type="checkbox"/> YES <input type="checkbox"/> NO |

| A. Physical Security Risk (con't) | |
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| 7.) Have you ever conducted a test to see if your facilities can be entered by unauthorized personnel? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 8.) Do you have policies and procedures in place for intrusion incident response? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 9.) Do you have surveillance cameras in place at key facilities? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 10.) Do you have a system in place that automatically identifies suspicious behavior as seen on the surveillance system and creates a management alert? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 11.) Do you regularly review your video if there is not a system to automatically identify suspicious behavior? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| B. Network Security Risks | |
| 1.) Do you have a complete map of your network and all its interconnections, both within your organization and with outside entities? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Do your vendors and partners have a strong commitment to network security? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Have you reviewed your vendors and partners' written plans and checkpoints that demonstrate implementation?" | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 4.) Do you have a map of the data elements that pass between each application system on your network and with outside entities? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5.) Are all of your network connections to outside entities secured by a Virtual Private Network (VPN) or something comparable? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 6.) Is there any group or department within your organization whose mission is to monitor network security? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 7.) Have you developed a worst case scenario for potential damage if an unauthorized person gains access to any part of your network? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 8.) Do you have anti-virus software installed to detect "Advanced Persistent Threats"? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 9.) Does any outside entity, such as a statewide voter registration system, have the ability to alter or delete data from any of your internal systems? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 10.) Do you regularly conduct vulnerability and intrusion testing on your network? | <input type="checkbox"/> YES <input type="checkbox"/> NO |

| C. Software Applications Security Risks | |
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| <i>(Note: Systems may have numerous applications that touch them. For example, a voter registration system may be composed of a voter database application, and also connected e-poll book software application, and connected statewide voter database application. Running the application level analysis on each of the program level applications will give you your best sense of your security and preparedness.)</i> | |
| 1.) Application (insert name) Security Risks (repeat a, b, c and d questions for every security risk application) | |
| a.) Information at Risk | |
| 1.) Does your application house any information not subject to public disclosure? <i>(for example, any personally identifiable information (PII) such as SSN, Driver's license, date of birth, etc.)</i> | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Do you employ encryption standards for all data - specifically personal identifiable Information? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Does this application share, transmit, or receive information with any other application or system? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 4.) Does this application house any data that affects election results? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5.) Does this application have any type of network or internal system connection with any application that affects election results? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 6.) Does this application house any data that is essential to the running of an election, and without which the election would either be impossible to administer or whose results might be questioned? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| b.) Acceptable Use Policy | |
| 1.) Do you have a written policy for this application describing who may use it and under what circumstances? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Do you have an enforcement mechanism and management review process in place to ensure compliance with any such policy? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Is your acceptable use policy implemented in software in such a manner that your systems enforce the policy? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| c.) Worst Case Scenarios | |
| 1.) If this application or its database were completely destroyed or disabled at a critical time, could you still conduct your election? | <input type="checkbox"/> YES <input type="checkbox"/> NO |

| c.) Worst Case Scenarios (con't) | |
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| 2.) Even if you could conduct the election, would public confidence in the results be maintained? <i>(for example, a hacker had cancelled a large number of voter registrations for one competing party).</i> | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Could you still ensure that no voters would be disenfranchised as a result of the application problem? <i>(for example, excessively long lines, or unavailable registration information, or for some other reasons).</i> | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| II. Defense Layers | |
| A. Physical Defenses | |
| 1.) Is physical access to your site restricted to authorized users? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Is there site security staff at the location(s) where your system is located? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Is there a log of the identities and access times of individuals physically accessing your site? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 4.) Is your site security staff present at times when staff are not present? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5.) Are all entrances (including windows, etc.) secured by alarms and/or security cameras? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 6.) Does your management regularly review physical security records such as logs, video footage, alarm notifications, etc.? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 7.) Is the data center where your computer servers are located physically protected in the event of fire, terror attacks or flooding? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 8.) Do you have a backup site available if any of your facilities become suddenly inoperable during a critical period? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 9.) Have you determined how long it will take to get the backup site functioning? (including the determination of any loss of data). | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 10.) If any of your computer systems are housed in a vendor-supported data center, has that vendor supplied you with a detailed description of their physical security, fire protection, backup and recovery procedures? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 11.) Are your temporary workers required to wear ID badges or other identification so that unauthorized persons in your facilities can be quickly spotted? | <input type="checkbox"/> YES <input type="checkbox"/> NO |

| B. Network Defenses | |
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| 1.) Is there an “air gap” between the Internet and your election tally system (i.e. is your tally system physically disconnected from the Internet)? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Do you employ encryption standards for all data - specifically personal identifiable Information? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Are your public-facing voter systems, e.g. a “check my registration” application, built using copies of critical information rather than being directly connected to critical information databases? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 4.) Do you review your network activity logs daily? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5.) Do you review your logs at least once a week? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 6.) Do you have any User & Entity Behavior Analytics (UEBA) software running on any of your critical infrastructure that can alert you to suspicious network activity? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 7.) Do you conduct any periodic vulnerability, intrusion and penetration testing on your networks? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 8.) Do you create and store daily application system back-ups? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 9.) Do you transfer data to or from the isolated network using a specified USB device that is used only for that purpose and verified to be clean? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 10.) Do you have a network access control system that controls user access permission levels? (e.g. Microsoft Active Directory) | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 11.) Do you control access to any of your systems by outside organizations or individuals by using Virtual Private Networks (VPNs)? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 12.) Is your network password-protected? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 13.) Do you provide administrative passwords only to employees with a clearly defined “need to know/edit” status? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 14.) Do you change critical system passwords regularly (recommendation every 90 days)? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 15.) Do you ensure that servers, PCs and laptops are encrypted or updated with the most current security patches? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 16.) Do you ensure the organization has the most current versions of virus protection software? | <input type="checkbox"/> YES <input type="checkbox"/> NO |

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| C. Software Applications Defenses | |
| 1.) Application (insert name) Defenses (repeat a., b., c., d questions for every software defense application) | |
| a.) Data Protections | |
| 1.) Are only authorized personnel granted access to the software? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Is this application set up with different, unique passwords for each user? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Is this application set up with different passwords for different elections? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 4.) Is this application set up with robust passwords (<i>passwords include special characters and caps-best practices recommends changing passwords every 90 days</i>)? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5.) Is this application set up with tokens or other special access rights? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| b.) Software level application level protections | |
| 1.) Is the software platform protected by a firewall? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Is the software platform isolated in the network environment? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| c.) Software Logs | |
| 1.) Does the software log the user name, time, date, and type of modification? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Does the software log multiple log-in attempts, increased data traffic, and/or volume of data transmitted? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| d.) User & Entity Behavior Analytics (EUBA) | |
| 1.) Do you have baseline measurements for “normal” activity patterns within this application and an alert system that identifies abnormal activity patterns? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| III. System Disaster Recovery | |
| A. Physical Disaster Recovery | |
| 1.) Is there backup for the loss of hardware (<i>networks, servers, computers and laptops, wireless devices</i>)? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Is hardware available at an alternate facility that can be configured to run similar hardware and software applications when needed? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Is there backup for the loss of impounded voting equipment? | <input type="checkbox"/> YES <input type="checkbox"/> NO |

| A. Physical Disaster Recovery (con't) | |
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| 4.) Is there a contingency for natural disasters or homeland security breach for data contained at data center? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 5.) Are there plans for relocating Receiving Stations (where poll workers return election night supplies) in the event of a natural disaster or homeland security breach? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 6.) Is there backup for the loss of data from election equipment damage? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 7.) Is there access to network infrastructure hardware that could replace failed components? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 8.) Is there ready access to your alternative physical locations? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 9.) Is there a timeframe in place for the alternative facility to be functioning? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| B. Network Disaster Recovery | |
| 1.) Is there a plan for providing automatic redirects for interfaced systems should you need to move your system to a new network location? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Is there access to network infrastructure hardware that could replace failed components? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) For the backup hardware and networking plan, is there necessary staff available during critical periods? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| C. Software Applications Disaster Recovery | |
| 1.) Application (insert name) Disaster Recovery (repeat a., b., c., d questions for each software disaster application) | |
| a.) Damage Assessment | |
| 1.) Are vendors on standby for critical periods to assist with Assessment and Disaster Recovery? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Are you able to run a hash comparison with the recovery (i.e. back-up) copy of your software application? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| b.) Data Restore | |
| 1.) Are your backup disks or file locations readily accessible? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Are your backup files saved in an off-site location? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) If you have a parallel application running, is it up to date? | <input type="checkbox"/> YES <input type="checkbox"/> NO |

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| c.) Application Restore | |
| 1.) Do you have necessary staff or vendor resources available to assist with the installation of the application in a mirrored physical and OS environment? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| d.) Business Restore | |
| 1.) Are you prepared to cut over to alternative applications that can manage limited business critical functions? <i>(For example, if your Voter Registration System crashes, can you quickly utilize your web based voter search application so that you can direct voters to their polling place on Election Day?)</i> | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 2.) Are there paper alternatives to allow you to continue with on-going critical processes while technical systems are diagnosed and brought back? <i>(For instance, do your voting machines create countable paper trails viewable by each voter?)</i> | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| 3.) Can you quickly create paper voter lists in the event e-poll books go down? | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| The Election Center would like to acknowledge and thank the committee that worked on the initial draft of this checklist: Noah Praetz, Cook Co. IL; Dean Logan, Los Angeles Co. CA; Jennifer Morrell, Arapahoe Co. CO; Janice Case, King County, WA; Eric Fey, St. Louis Co. MO; Brian Corley, Pasco Co, FL and Ryan Macias, U.S. EAC | |