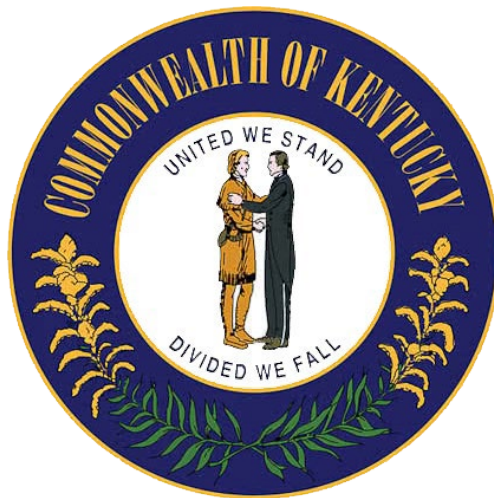# CERTIFICATION PROCEDURES FOR E-POLL BOOK PRODUCTS

Kentucky State Board of Elections

SEPTEMBER 1, 2022

Table of Contents

Terms and Definitions:

1) **E-poll Book Product –** KY statutory definition, synonymous with Electronic Poll Book System defined below.
2) **Electronic Poll Book System (EPBS) –** sum total of all devices/software/services composing entire system.
3) **Electronic Poll Book (EPB) –** endpoint device.
4) **Electronic Poll Book Central Server (EPBCS) –** Central repository/DB/administrative.
5) **Kentucky State Board of Election (SBE)**
6) **Technical Data Package (TDP) –** Vendor supplied documentation.
7) **Voter Registration System (VRS) –** Kentucky's voter registration system and database.
8) **Voter's Unique Identifier (VUID)**
9) **Precinct –** a single area within a county that will cast ballots at one location on Election Day.
10) **Consolidated Location –** a combination of two (2) or more precincts put together with the intent of sharing Election Equipment and Election Officers on Election Day. ONLY voters who reside in the combination of these specific precincts may cast a ballot in this polling location.
11) **Vote Center –** a location where any voter in the entire county can vote on Election Day.

In accordance with KRS 117.379, the State Board of Elections shall prescribe specific standards and requirements for the certification of an electronic device capable of holding a file of voter data and related information for use in identifying registered voters prior to a voter's receiving or casting a ballot and allowing a voter to electronically sign in using an electronic registered voter roster in lieu of signing a paper registered voter roster. The process and standards for the certification of these devices is outlined below.

1. Application Process

A vendor seeking certification of an e-poll book product in Kentucky must apply for Certification with the State Board of Elections before the date of the Functional Examination can be set by the State Board of Elections. That application must include:

1. A completed Application for Certification
2. A Technical Data Package, including the following documentation:
   a. User Operating, Support, and Maintenance Manuals
   b. Training Materials and Instruction Guides
   c. Recommended Use Procedures
   d. Software License Agreement
   e. Software System Design
   f. Warranty Information
   g. Recommended Security Practices
   h. Internal Test Reports and Test Data
   i. A list of all commercial off-the-shelf software, freeware, open-source software and necessary drivers, operating systems, and any software applications for operations, logging, reporting, printing, etc.
3. A list of certifications and denials of certification for the system in other jurisdictions
4. A list of all known defects and failures experienced with the use of the e-poll book product, including detailed resolutions for those anomalies included
5. A list of all consumables required for the continued operation of the system and the supply chain for those consumables
6. A list of peripherals and/or devices, including those required for usability and accessibility, which can be used within the EPBS.
7. A description of accessibility features and any testing and/or certifications for useability and/or accessibility.
8. Screenshots of all phases of the e-poll book product process that interact with elections workers and/or voters
9. A statement of Corporate Information to include:
   a. History and description of business:
      i. Year Established
      ii. Products and Services
      iii. Subsidiary and Parent Companies
      iv. Identity of any individual entity, partnership, or organization owning a controlling interest in E-Poll Book Product provider
      v. Identity of any investors whose investments have an aggregate value that exceeds more than 5% of the E-Poll Book Product company
   b. Management and staff organizational chart, number of full-time and part-time employees who will be available for Kentucky Counties
   c. Locations of all third-party vendors and manufactures of vendor's E-Poll Book Product and its components
   d. Locations of facilities that will service, monitor, and store data for vendor's E-Poll Book Product
   e. Overview of cybersecurity processes to preserve the integrity of voter data
   f. Disclosure of existence and amount of cybersecurity insurance

g. Disclosure of voter, county, or state data for any purpose other than providing E-poll Book Product services to Kentucky and its counties is prohibited

10. Certification Fee of $500 which is nonrefundable

All efforts will be taken by the SBE to honor the privacy of any proprietary information contained in the application.

The application may be submitted in a paper or electronic format to the State Board of Election's Office at the following address:

> Kentucky State Board of Elections
> c/o Karen Sellers, Executive Director
> 140 Walnut Street
> Frankfort, KY 40601
> karen.sellers@ky.gov

2. Certification Process

The certification process in Kentucky involves two phases:
- Technical Examination by a NIST-certified testing laboratory
- Functional On-Site Examination by the State Board of Elections

3. Technical Examination

The Technical Examination must be performed by a NIST-certified testing laboratory. The vendor must submit a copy of the Technical Data Package (TDP) to the testing lab, which must assess the system's requirements with the "Kentucky E-Poll Book System Technical Test Matrix" for an E-poll Book Product. The vendor is responsible for any costs and fees associated with conducting these tests.

The vendor will satisfy this portion of the testing by submitting a test report from the testing lab demonstrating that the vendor provided the testing lab with a copy of the TDP and that the e-poll book product satisfies the requirements of the "Kentucky E-Poll Book System Technical Test Matrix".

4. Functional On-Site Examination

The Functional On-Site Examination will be conducted by a three-member examining committee composed of one (1) examiner who is an expert in computer science, voting systems, or e-poll book products, whichever is applicable; one (1) person who is knowledgeable in election procedures, election security, and election law in Kentucky; and one (1) person who is a present or former county clerk assigned by the State Board of Elections Office according to the standards outlined in the "Kentucky Functional On-Site Testing Matrix" for E-poll Books as well as KRS 117.339(2)(a).

The vendor will present the e-poll book product for an in-person examination that will take place at the office of the State Board of Elections. The examiners will conduct functional on-site testing of the e-poll book product to determine whether that system meets the requirements outlined in the Kentucky Functional Requirements (Section 13 of this document) for an E-poll Book Product.

Before the date of the Functional On-Site Examination, the vendor must provide the State Board of Elections with a report from a NIST-certified testing laboratory demonstrating that the e-poll book product meets the requirements of the "Kentucky E-Poll Book System Technical Test Matrix".

After reviewing the Application for Certification, the test report from the NIST-certified testing lab, and the examiner's completed Functional On-Site Testing Matrix (Sections 5 and 6 of this document), the State Board of Elections will issue a decision of on whether or not the e-poll book product will be certified for use in Kentucky elections.

The certification of the system is based on the specific configuration of the system that is presented during the Functional On-Site and Technical Examinations. If there are multiple potential configurations that the vendor wishes to use in Kentucky elections, those must be presented during the examination process. Otherwise, those configurations will not be included in the certification of that system.

As a part of the examination, Kentucky will inspect all system operations and procedures. The EPB system must demonstrate accuracy, reliability, security, usability and accessibility throughout all testing phases.

5. Functional On-site Testing Matrix

Please be prepared to successfully demonstrate:

1. All of the user account types available.
2. All communication ports, types and protocols available.
3. All security features (including but not limited to):
    a. Software
    b. Hardware
    c. Encryption
4. All available ancillary equipment.
5. Loading the roster provided by SBE.
6. Validation of the roster's correct integration into the poll book.
7. All voter check-in functionality:
    a. Voter look up: all paths
    b. Voter identification verification: all paths
    c. Ballot styles
    d. Voter record: all fields for every voter type
        i. ACP
        ii. Permanent assistance
        iii. Supplemental
        iv. Provisional
        v. Et al.
    e. Voter check-ins:
        i. Success
            1. Using KY DL/ID
            2. Using voter information look up
        ii. Failure
            1. Voter not found
            2. Voter in other precinct
            3. Et al.
        iii. Abandoned
        iv. Spoiled
8. Multiple poll books in specific deployment configurations:
    a. With connectivity
        i. Central server direct syncing
        ii. Peer-to-peer lateral syncing (in addition to Central server)
    b. Without connectivity
        i. Peer-to-peer lateral syncing

9. The election "Open" process, demonstrating features such as:
   a. Procedures
   b. Sign-offs
   c. Reports
   d. Auditing
10. The election "Close" process, demonstrating features such as:
    a. Procedures
    b. Sign-offs
    c. Reports
    d. Auditing
11. All summary and reporting features available on individual poll books.
12. All trouble-shooting or help features available on individual poll books.
13. Data/file upload and download features:
    a. Real-time
    b. Delta files
    c. Updates
14. Comprehensive overview of Central Server functionality such as:
    a. Election Management
    b. Reporting
    c. Data Analysis
    d. Software Updating
    e. Troubleshooting
    f. Deployment Tracking
15. Any other pertinent functionality or features not specifically outlined above.

6. Additional Non-functional Requirements

1) **Documentation**:
   i) Documentation shall be plainly worded, complete, and understandable
   ii) Documentation shall be provided for various situations and roles:
      (1) System Administration
      (2) Poll workers
      (3) Troubleshooting and technical Issues
   iii) Quick Guides: Pre-Election Checklist, Election Day Checklist, Post-Election Checklist
2) **Help Desk Support:**
   i) Standard contract, product support, and service level agreement (SLA) including:
      (1) Customer and Technical Support Hours
      (2) Contact Information
      (3) Specific escalation timeline and procedures
      (4) Specific expectations for on-site and technical support for:
         (a) Elections (Early Voting period up to and including Election Day)
         (b) Within 60 days before Election Day
      (5) Specific time limit expectations for support, repair, maintenance, and service requests.
3) **Training**:
   i) Vendor shall provide sufficient training to election officials and poll workers to completely familiarize them with the operations essential for carrying out election activities.
   ii) Training materials shall be in written or video form and must be in a format suitable for use at a polling place.
4) **System Usability:**
   i) Provide reasonably easy procedures for setting up, using, and shutting down.
   ii) Be reasonably easy for a precinct election officer to learn, understand, and use.

  iii) Be reasonably configurable and customizable by a user with minimal technical knowledge.

5) **Accessibility:**
  i) Allow the user to reasonably adjust settings as needed.

7. Initial Certification Process by January 1, 2023

KRS 117.379(2)(c) requires an e-poll book product that is used in Kentucky elections to be certified by the State Board of Elections. Vendors who wish to offer their e-poll book product to jurisdictions in Kentucky for elections occurring in 2023 will need to have those systems certified before January 1, 2023.

The Application for Certification (along with all accompanying documentation) must be submitted no later than December 1, 2022. The State Board of Elections will schedule the in-person Functional On-Site Examination of the system as soon as the Application is received and will be able to offer examination dates as early as October. The vendor will need to submit their system for testing with the testing lab and provide the report from the testing lab to the State Board of Elections before the date of the Functional On-Site Examination. The in-person Functional On-Site Examination will need to occur before December 15, 2022, for the system to receive a certification by January 1, 2023.

Once the examination has taken place, the State Board of Elections will have 30 (thirty) days to make a determination on certification. However, all applications submitted by December 1, 2022, will have a certification decision issued by January 1, 2023. Any vendor seeking certification after January 1, 2023 would need to file prior to January 1 of the year they intend to apply for certification.

8. Modification Process

Any modifications to a Kentucky-certified e-poll book product must be submitted to the State Board of Elections for administrative review. The request must be submitted in writing to the State Board of Elections and must contain sufficient information to identify the changes to the system's most recently certified version. The request must also contain a statement from a NIST-certified testing laboratory approving the proposed modifications or stating that the proposed modifications do not warrant examination by the testing lab.

Upon receiving the request for review of a modification, the State Board of Elections has discretion to review the modification through this administrative process or determine if a formal certification process is required for the approval of the modification.

If the request is reviewed through the administrative review process, the employees of the State Board of Elections will determine if the requested modification requires an in-person examination or if the change is de minimis and does not require an in-person examination of the modification. At the completion of this review, the State Board of Elections will notify the vendor in writing if the modification is approved or denied.

9. Decertification Process

The State Board of Elections reserves the right to decertify any e-poll book product at any point that the agency determines that the product has fallen below the minimum standards required for certification or otherwise fails to meet the current security needs of Kentucky election officials. Upon such a determination, the State Board will issue to the vendor findings identifying issues supporting the decertification decision. If such action is taken and a vendor that has had a product decertified wishes to sell and operate that product in Kentucky again, the vendor may go through a recertification process if all identified issues have been resolved with the product.

10. Recertification Process

To seek recertification of a previously certified e-poll book product, the vendor must submit a new Application for Certification (including all required documents) by October 1st of the year preceding the year in which the product will be used. The vendor will be required to complete the full certification process, including the Technical Examination and Functional On-Site Examination phases.

The State Board of Elections will issue a decision on recertification within 30 (thirty) days of the receipt of the Application for Certification. The State Board of Elections may choose to grant the certification, deny the certification, or require additional in-person examination of the system before recertification may be granted.

11. Notice of Vendor Agreement of Stipulations with the Board of Elections

Upon certification of E-poll Book Product, the State Board of Elections shall request the following specific agreements from a certified vendor:

1. Any data file or format that the vendor would need in order to provide services to their client counties must be approved and agreed upon by State Board of Elections no later than 60 (sixty) days before a Primary, General, or Special election. This data will be provided to vendors in a timely manner to provide their services.
2. The State Board of Elections, in its capacity to perform audits prior to releasing voter credit and turnout reports, shall request information:
    a. To identify that all e-poll products data has been accounted for by the vendor.
    b. To provide said voter credit information to Kentucky voters
3. The State Board of Elections will be the sole authority to give Counties the permission to erase data files from their E-Poll Book Products after any election.

12. Modifications to E-poll Book Product Standards

Upon completion of the initial round of certifications, the State Board of Elections may make modifications to the Technical and Functional On-Site Matrices for future e-poll book product certifications. Any modifications made to the current process will be in place by **July 31, 2023,** to provide vendors adequate time to ensure compliance with the revised standards.

13. Functional Requirements

1. Terms and Definitions:
1.1. **E-poll Book Product –** KY statutory definition, synonymous with Electronic Poll Book System defined below.
1.2. **Electronic Poll Book System (EPBS) –** sum total of all devices/software/services composing entire system.
1.3. **Electronic Poll Book (EPB) –** endpoint device.
1.4. **Electronic Poll Book Central Server (EPBCS) –** Central repository/DB/administrative.
1.5. **Kentucky State Board of Election (SBE)**
1.6. **Technical Data Package (TDP) –** Vendor supplied documentation
1.7. **Voter Registration System (VRS) –** Kentucky's voter registration system and database.
1.8. **Voter's Unique Identifier (VUID)**
1.9. **Precinct –** a single area within a county that will cast ballots at one location on Election Day.
1.10. **Consolidated Location –** a combination of two (2) or more precincts put together with the intent of sharing Election Equipment and Election Officers on Election Day. ONLY voters who reside in the combination of these specific precincts will cast a ballot in this polling location.

1.11. **Vote Center –** a location where any voter in the entire county can vote on Election Day.

2. Electronic Poll Book System (EPBS) Shall:

2.1. Track and persist every action performed on an Electronic Pollbook Central Server.

2.1.1. System

2.1.2. User

2.2. Provide industry standard secure communications within the provided Electronic Pollbook System:

2.2.1. Peer-to-peer real-time -and/or-

2.2.2. Central server

2.3. Provide industry standard secure communications with KY Voter Registration System:

2.3.1. Check-ins:

2.3.1.1. Real-time (Preferred) -or-

2.3.1.2. Periodic delta files -or-

2.3.1.3. Daily delta files

2.4. Provide automated and user initiated:

2.4.1. Data summaries

2.4.2. Reports

2.4.3. Backups

2.5. Provide countywide running totals and end-of-day summary information (Totals) for:

2.5.1. Check-ins

2.5.2. In-person Excused Absentee

2.5.3. In-person No Excuse Absentee

2.5.4. Election day

2.5.5. Ballot styles

2.5.6. Address Confidentially Program (ACP)

2.5.7. Inactive Voters

2.5.8. Already voted:

2.5.8.1. Mail-in Absentees

2.5.8.2. In-person Excused Absentees

2.5.8.3. In-person No-Excuse Absentees

2.5.8.4. Election day voters

2.5.9. Out-of-precinct voters

2.5.10. Out-of-county voters

2.5.11. Military absentees

2.5.12. Check-in cancellations

2.5.13. Spoiled ballots

2.5.14. Provisional ballots

2.5.15. Supplemental ballots

2.5.16. Abandoned check-ins

2.5.17. Look-ups

2.6. Provide specialized instructions and/or screens for all:

2.6.1. System errors

2.6.2. User errors

2.7. Transmit accurate voter check-in summary information (Totals) to SBE:

2.7.1. End of day

2.7.2. At end of election (after election close)

2.8. Provide ability to add or remove new EPB units without disruption of service during an election.

2.9. Provide central administration functionality (including but not limited to):

2.9.1. Asset tracking

2.9.2. Reporting

2.9.3. Troubleshooting

2.9.4. Downloading

2.9.5. Uploading

2.9.6. Software updating

2.10. Provide the ability to accommodate partisan elections by using only one roster and check-in process by party

2.11. Provide the ability to accommodate all of the different types of polling locations used in Kentucky:

2.11.1. Precinct

2.11.2. Consolidated Precinct

2.11.3. Vote Center

2.12. Provide for any combination of election types held concurrently with another election type

2.13. Messaging and instruction text changes without requiring a software update (Optional but preferred)

2.14. Reporting:

2.14.1. EPBS and/or EPB shall produce "Election Set-up Success" report

2.14.2. EPBS and/or EPB shall produce "Audit log of all system activity" report

2.14.3. EPBS and/or EPB shall produce "Election Close Success" report

2.14.4. EPBS and/or EPB shall provide on-demand summary information (see 13.3.12)

2.14.5. EPBS and/or EPB shall provide any other reports required by Kentucky statute

3. Electronic Poll Book (EPB) shall:

3.1. Track and persist every action performed on an EPB.

3.1.1. System

3.1.2. User

3.1.3. Voter

3.2. Track and persist all errors and exceptions.

3.2.1. System

3.2.2. User

3.2.3. Voter

3.3. Re-synchronize after any interruption of network connectivity:

3.3.1. Peer-to-peer -and/or-

3.3.2. Central server

3.4. Provide automated and user initiated:

3.4.1. Data summaries

3.4.2. Reports

3.4.3. Backups

3.5. Provide role-based user accounts based on least privilege access principles.

3.6. Permit a voter to check-in and sign the roster with or without network connectivity.

3.7. Provide check-in information to all local EPBs via an orthogonal/lateral secure communications channel to protect against local multiple-voting scenarios.

3.8. Provide check-in information to all EPBs countywide via the EPB Central Server secure communications to protect against countywide multiple-voting scenarios.

3.9. Provide for the capture and persistence of individual voter signatures.

3.10. Clearly display election specific information (shall include but not be limited to):

3.10.1. Current election

3.10.2. Date/time

3.10.3. Current database

3.10.4. Device ID

3.10.5. Current user account

3.11. Provide specialized instructions and/or screens depending upon the voter's status.

3.11.1. In-person Excused Absentee

3.11.2. In-person No-Excuse Absentee

3.11.3. Election day

3.11.4. Address Confidentially Program (ACP)

3.11.5. Inactive Voter

3.11.6. Already voted:

    3.11.6.1. Mail-in Absentee

    3.11.6.2. In-person Excused Absentee

    3.11.6.3. In-person No Excuse Absentee

    3.11.6.4. Election day

3.11.7. Out-of-precinct voter

3.11.8. Out-of-county voter

3.11.9. Military absentee

3.11.10. Cancelled check-in

3.11.11. Spoiled ballot

3.11.12. Provisional ballot

3.11.13. Supplemental ballot

3.11.14. Abandoned check-in

3.11.15. Look-up

3.12. Provide running totals and summary information for:

3.12.1. Check-ins

3.12.2. In-person Excused Absentee

3.12.3. In-person No Excuse Absentee

3.12.4. Election day

3.12.5. Ballot styles

3.12.6. Address Confidentially Program (ACP)

3.12.7. Inactive Voters

3.12.8. Already voted:

    3.12.8.1. In-person Excused Absentees

    3.12.8.2. In-person No-Excuse Absentees

    3.12.8.3. Election day voters

3.12.9. Out-of-precinct voters

3.12.10. Out-of-county voters

3.12.11. Military absentees

3.12.12. Check-in cancellations

3.12.13. Spoiled ballots

3.12.14. Provisional ballots

3.12.15. Supplemental ballots

3.12.16. Abandoned check-ins

3.12.17. Look-ups

3.13. Provide Status and Alerts:

3.13.1. Connectivity:

    3.13.1.1. Network

    3.13.1.2. Other poll books

    3.13.1.3. Central server

3.13.2. Failure in synchronization.

3.13.3. Battery status

3.13.4. Peripheral status

3.14. Provide Functional Status and Alerts.

3.14.1. Success/Failure of any system function or process.

3.14.2. Success/Failure of user tasks, such as:

    3.14.2.1. Setup

    3.14.2.2. Check-in

    3.14.2.3. Upload/download tasks

    3.14.2.4. Deletion

3.14.2.5. Close-out

3.15. Find eligible voters from the correct KY roster using:

    3.15.1. Kentucky DL/ID barcode

    3.15.2. Voter lookup with search filter capabilities (shall include but not be limited to):

        3.15.2.1. Last name

        3.15.2.2. First name

        3.15.2.3. DOB

        3.15.2.4. Address

        3.15.2.5. Voter ID

3.16. Persist proof of identity:

    3.16.1. Type of ID accepted: (Note: Bolded acronyms serve as types)

        3.16.1.1. Document containing name and photo issued by:

            3.16.1.1.1. United States of America (**USA**)

            3.16.1.1.2. Commonwealth of Kentucky (**KY**):

                3.16.1.1.2.1. KY Driver's License

                3.16.1.1.2.2. KY Identification Card

            3.16.1.1.3. Military (**MIL**):

                3.16.1.1.3.1. United States Dept. of Defense

                3.16.1.1.3.2. Branch of the Uniformed Services

                3.16.1.1.3.3. Merchant Marines

                3.16.1.1.3.4. Kentucky National Guard

            3.16.1.1.4. Public or Private (**SCHOOL**):

                3.16.1.1.4.1. College

                3.16.1.1.4.2. University

                3.16.1.1.4.3. Post Graduate Technical School located in the United States

                3.16.1.1.4.4. Post Graduate Professional School located in the United States

            3.16.1.1.5. Any of the following governments (**GOVT**):

                3.16.1.1.5.1. City Government

                3.16.1.1.5.2. County Government

                3.16.1.1.5.3. Urban County Government

                3.16.1.1.5.4. Charter County Government

                3.16.1.1.5.5. Consolidated Local Government

                3.16.1.1.5.6. Local Government located in Kentucky

        3.16.1.2. Voter must sign SBE 71 and present:

            3.16.1.2.1. Social Security Card (**SS**)

            3.16.1.2.2. SBE Approved County ID Card (**SBE**)

            3.16.1.2.3. Any ID card displaying their Name and Photo (**ID**)

            3.16.1.2.4. Any of the following Benefit Cards (**AID**):

                3.16.1.2.4.1. Food Stamp Identification Card

                3.16.1.2.4.2. Electronic Benefit Transfer Card

                3.16.1.2.4.3. Supplemental Nutritional Assistance Card issued by KY displaying their name

            3.16.1.2.5. Credit/Debit Card displaying their name (**CC**)

        3.16.1.3. Election officer must complete SBE 72 form (**KNOWN**)

            3.16.1.3.1. If the voter is personally known to the election officer

3.17. Present voter information for verification (shall include but not be limited to):

    3.17.1. Name

    3.17.2. Address

    3.17.3. Party

    3.17.4. DOB

3.18. Present correct ballot style:

    3.18.1. Ballot ID -or-

3.18.2. Ballot barcode printout -or-

3.18.3. Physical ballot

3.19. Capture voter signature:

    3.19.1. Digital signature -or-

    3.19.2. Mark

3.20. Capture Poll-worker initials

3.21. Completes check-in and persists an individual voter's session data and metadata (shall include but not be limited to):

    3.21.1. Date/time of check-in

    3.21.2. Suggested ballot style

    3.21.3. Device ID

    3.21.4. Current DB

    3.21.5. Current election

    3.21.6. Poll-worker ID

    3.21.7. Poll-worker initials

    3.21.8. Voter signature

    3.21.9. Proof of identity (Type of ID accepted)

    3.21.10. Type of vote:

        3.21.10.1. In-person Excused Absentees

        3.21.10.2. In-person No-Excuse Absentee

        3.21.10.3. Election day voter

        3.21.10.4. Supplemental

        3.21.10.5. Provisional

    3.21.11. Physical location

    3.21.12. Connectivity status at point of check-in

3.22. Opening an election. Provide for the user to verify that the EPB has:

    3.22.1. An authenticated user with the proper access rights.

    3.22.2. Been set up for the proper election.

    3.22.3. Been set up for the proper polling location type.

    3.22.4. Been set up for the proper precinct.

    3.22.5. Been set to the proper physical location.

    3.22.6. Has the correct roster file.

    3.22.7. Has the proper connectivity needed for a specific polling location type:

        3.22.7.1. Network

        3.22.7.2. Cell

        3.22.7.3. Bluetooth

3.23. Closing an election. Provide for the user to verify that:

    3.23.1. All check-in data has been successfully persisted locally.

    3.23.2. All check-in data from sibling pollbooks (if used) has been successfully persisted.

    3.23.3. All other required steps, processes, uploads, approvals have been successfully completed.

E-POLL BOOK SYSTEM

TECHNICAL TEST MATRIX

Kentucky State Board of Elections

SEPTEMBER 1, 2022

Technical Test Matrix

1. Terms and definitions:

1.1. **E-poll Book Product –** KY statutory definition, synonymous with Electronic Poll Book System defined below.

1.2. **Electronic Poll Book System (EPBS) –** sum total of all devices/software/services composing entire system.

1.3. **Electronic Poll Book (EPB) –** endpoint device.

1.4. **Electronic Poll Book Central Server (EPBCS) –** Central repository/DB/administrative.

1.5. **Kentucky State Board of Election (SBE)**

1.6. **Technical Data Package (TDP) –** Vendor supplied documentation

1.7. **Voter Registration System (VRS) –** Kentucky's voter registration system and database.

1.8. **Voter's Unique Identifier (VUID)**

1.9. **Precinct –** a single area within a county that will cast ballots at one location on Election Day.

1.10. **Consolidated Location –** a combination of two (2) or more precincts put together with the intent of sharing Election Equipment and Election Officers on Election Day. ONLY voters who reside in the combination of these specific precincts will cast a ballot in this polling location.

1.11. **Vote Center –** a location where any voter in the entire county can vote on Election Day.

2. Application Matrix (Vendor):

#	Ref	Description	Met	Not Met	Comments
1	1.2	Vendor has provided test lab with a full copy of Technical Data Package, including: a. User Operating, Support, and Maintenance Manuals. b. Training Manuals and Instruction Guides. c. Recommended Use Procedures. d. Software License Agreement. e. Software System Design. f. Warranty Information. g. Recommended Security Practices. h. Provide any internal test reports and test data. i. Provide a list of all commercial off-the-shelf software, freeware, open-source software and necessary drivers, operating systems, and any software applications for operations, logging, reporting, printing, etc.			

2	1.4	Vendor has provided a list of all known defects and failures experienced with the use of the EPBS, including detailed resolutions for those anomalies.			
3		Vendor has provided a list of all usability test results: (i) that are conducted by the manufacturer of the electronic poll book on an independent testing facility using individuals who are representative of the general public; (ii) that include the setting up, using, and shutting down of the electronic poll book; and (iii) that report their results using industry standard reporting formats.			
3	1.6	Vendor has provided a list of peripherals and/or devices, including those required for usability and accessibility, which can be used within the EPBS.			
4	1.7	Vendor has provided a description of accessibility features, if any, including any accessibility standards the EPBS meets.			
5	1.8	Vendor has provided screenshots of all phases of the e-poll book product process that interact with elections workers and/or voters that is not included in product documentation.			
6		Vendor has provided a list of any other components recommended by the manufacturer for use within the EPBS.			
7	3	Vendor has provided a complete and self-contained independent test environment for use in end-to-end testing.			

3. Technical Matrix (Testing Lab):

#	Ref	Description	Met	Not Met	Comments
8	3	Testing Lab shall install and construct the Vendor's EPBS using the documentation, software and hardware supplied by the Vendor.			
9	3 13.2.12	Testing Lab shall test every operational, election worker, and voter activity/procedure as outlined in the manuals. The lab has flexibility in choosing order of testing to simulate the use of the EPBS in a special, primary and general election, including special and another election concurrently. Testing shall consist of the following at minimum: 1. Opening the election. 2. In-person Excused Absentees 3. In-person No Excuse Absentee 4. Election day Voting 5. Supplemental Voting 6. Provisional Voting 7. Closing the election 8. Generating required reports			
10	13.2.1 13.3.1	Testing Lab shall confirm that every activity of the EPBS and an EPB was tracked and persisted for auditability.			
11	13.2.2	Testing Lab shall confirm that all communications between EPBS components are secure and meet security best practices.			
12	13.2.3	Testing Lab shall confirm that check-in communications between the EPBS and VRS is secure noting type of check-ins, real-time, periodic and/or daily delta files.			
13	13.2.4	Testing Lab shall confirm that automated and user-initiated data summaries, reports and backups occurred.			
14	13.2.5	Testing Lab shall confirm the EPBS provided countywide and statewide running totals and summary information.			

15	13.2.6	Testing Lab shall confirm the specialized instructions and/or screen were provided for all system and user errors.			
16	13.2.7	Testing Lab shall confirm that accurate voter check-in summary information (Totals) is transmitted at the end of the day and at the end of the election (after election close).			
17	13.2.8	Testing Lab shall confirm that a new EPB can be added and that an EPB in the election can be removed without disruption of service during an election day.			
18	13.2.9	Testing Lab shall confirm that the EPBS provides central administration functionality for the following activities: 1. Asset tracking 2. Reporting 3. Troubleshooting 4. Downloading 5. Uploading 6. Software updating			
19	13.2.10	Testing Lab shall confirm the EPBS has the ability to accommodate partisan elections by using only one roster and check-in process by party.			
20	13.2.11	Testing Lab shall confirm the EPBS has the ability to accommodate all of the different types of polling locations used in Kentucky: 1. Precinct 2. Consolidated Precinct 3. Vote Center			
21	13.2.12	Testing Lab shall confirm the EPBS has the ability to provide for any combination of election types held concurrently with another election type.			
22	13.2.13	Testing Lab shall confirm if the EPBS allows messaging and instruction text changes without requiring a software update (**This functionality is optional but preferred**)			

23	13.3.2	Testing Lab shall confirm that all EPB errors and exceptions arising from the system, user and/or voter are tracked and persisted.			
24	13.3.3	Testing Lab shall confirm that all EPBs re-synchronize after any interruption of network connectivity.			
25	13.3.4	Testing Lab shall confirm that automated and user-initiated data summaries, reports and backups occurred.			
26	13.3.5	Testing Lab shall confirm that EPB provides for role-based user accounts on least privilege access principles.			
27	13.3.6	Testing Lab shall confirm the EPB permit a voter to check-in and sign the roster with or without network connectivity.			
28	13.3.7	Testing Lab shall confirm the EPB provides check-in information to all local EPBs via an orthogonal/lateral secure communications channel to protect against local multiple-voting scenarios.			
29	13.3.8	Testing Lab shall confirm the EPB provides check-in information to all EPBs countywide via the EPB Central Server secure communications to protect against countywide multiple-voting scenarios.			
30	13.3.9	Testing Lab shall confirm the EPB provides for the capture and persistence of individual voter signatures.			
31	13.3.10	Testing Lab shall confirm the EPBs clearly displays election specific information (shall include but not be limited to): 1. Current election 2. Date/time 3. Current database 4. Device ID 5. Current user account			

32	13.3.11	Testing Lab shall confirm the EPB provides specialized instructions and/or screens depending upon the voter's status.
		1. In-person Excused Absentee
		2. In-person No Excuse Absentee
		3. Election Day
		4. Address Confidentially Program (ACP)
		5. Inactive Voter
		6. Already voted:
		    a. Mail-in Absentee
		    b. In-person Excused Absentee
		    c. In-person No Excuse Absentee
		    d. Election day
		7. Out-of-precinct voter
		8. Out-of-county voter
		9. Military absentee
		10. Cancelled check-in
		11. Spoiled ballot
		12. Provisional ballot
		13. Supplemental ballot
		14. Abandoned check-in
		15. Look up			

33	13.3.12	Testing Lab shall confirm EPB provides running totals and summary information for:
		1. Check-ins
		2. In-person Excused Absentee
		3. In-person No Excuse Absentee
		4. Election day
		5. Ballot styles
		6. Address Confidentially Program (ACP)
		7. Inactive Voters
		8. Already voted:
		    a. In-person Excused Absentees
		    b. In-person No Excuse Absentees
		    c. Election day voters
		9. Out-of-precinct voters
		10. Out-of-county voters			

		11. Military absentees 12. Check-in cancellations 13. Spoiled ballots 14. Provisional ballots 15. Supplemental ballots 16. Abandoned check-ins 17. Look ups			

34	13.3.13	Testing Lab shall confirm EPB provides Status and Alerts:
		1. Connectivity:
		    a. Network
		    b. Other poll books
		    c. Central server
		2. Failure in synchronization
		3. Battery status
		4. Peripheral status			

35	13.3.14	Testing Lab shall confirm EPB provides Functional Status and Alerts.
		1. Success/Failure of any system function or process.
		2. Success/Failure of user tasks:
		    a. Setup
		    b. Check-in
		    c. Upload/download tasks
		    d. Deletion
		    e. Close out			

36	13.3.15	Testing Lab shall confirm EPB finds eligible voters from the correct KY roster using:
		1. Kentucky DL/ID barcode
		2. Voter lookup with search filter capabilities (shall include but not be limited to):
		    a. Last name
		    b. First name
		    c. DOB
		    d. Address
		    e. Voter ID			

37	13.3.16	Testing Lab shall confirm EPB captures, persists and transmits type of identification accepted as proof of identity. Types accepted: 1. USA 2. KY 3. MIL 4. SCHOOL 5. GOVT 6. SS 7. SBE 8. ID 9. AID 10. CC 11. KNOWN			
38	13.3.17	Testing Lab shall confirm EPB presents voter information for verification (shall include but not be limited to): 1. Name 2. Address 3. Party 4. DOB			
39	13.3.18	Testing Lab shall confirm EPB presents correct ballot style: 1. Ballot ID -or- 2. Ballot barcode printout -or- 3. Physical ballot			
40	13.3.19	Testing Lab shall confirm EPB captures, persists and transmits voter signature: 1. Digital signature -or- 2. Mark			
41	13.3.20	Testing Lab shall confirm EPB captures, persists and transmits poll-worker initials.			
42	13.3.21	Testing Lab shall confirm EPB completes check-in and persists individual voter's session data and metadata (shall include but not be limited to):			

		1. Date/time of check-in
		2. Suggested ballot style
		3. Device ID
		4. Current DB
		5. Current election
		6. Poll-worker ID
		7. Poll-worker initials
		8. Voter signature
		9. Proof of identity (Type of ID accepted)
		10. Type of vote:
		   a. In-person Excused Absentees
		   b. In-person No Excuse Absentee
		   c. Election day voter
		   d. Supplemental
		   e. Provisional
		11. Physical location
		12. Connectivity status at point of check-in			

43	13.3.22	Testing Lab shall confirm EPB opens an election. Provides for the user to verify that the EPB has:
		1. An authenticated user with the proper access rights.
		2. Been set up for the proper election.
		3. Been set up for the proper polling location type.
		4. Been set up for the proper precinct.
		5. Been set to the proper physical location.
		6. Has the correct roster file.
		7. Has the proper connectivity needed for a specific polling location type:
		   a. Network
		   b. Cell
		   c. Bluetooth			

44	13.3.23	Testing Lab shall confirm EPB closes an election. Provides for the user to verify that: 1. All check-in data has been successfully persisted locally.			

		2. All check-in data from sibling pollbooks (if used) has been successfully persisted. 3. All other required steps/processes/uploads/approvals have been successfully completed.			

4. Reporting Matrix:

#	Ref	Description	Met	Not Met	Comments
45	13.2.14	Testing Lab shall confirm that the following reports are available: 1. EPBS and/or EPB shall produce "Election Set-up Success" report 2. EPBS and/or EPB shall produce "Audit log of all system activity" report 3. EPBS and/or EPB shall produce "Election Close Success" report 4. EPBS and/or EPB shall provide on-demand summary information (see 13.3.12) 5. EPBS and/or shall provide any other reports required by Kentucky statute			

E-POLL BOOK SYSTEM
FUNCTIONAL ON-SITE TEST MATRIX

Kentucky State Board of Elections

SEPTEMBER 1, 2022

Functional On-Site Test Matrix

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1.11. **Vote Center** – a location where any voter in the entire county can vote on Election Day.

2. Testing Process

The Matrix is a list of specific functional requirements for any EPBS seeking certification for use in Kentucky. The Matrix is not meant to be followed in strict order. Features can be presented in a different order than listed below, however all of the line items must be verified by the three members of the SBE examining committee.

3. Testing Day Information:

Committee member name:	
Company Tested:	
Date of Testing:	Location of testing:
Time testing began:	Time testing ended:
Signature of tester:	

4. Functional On-Site Matrix:

#	Ref	Description	Met	Not Met	Comments
1	5.1	Vendor has demonstrated all available user account types.			
2	5.2	Vendor has demonstrated all communication ports, types and protocols.			
3	5.3	Vendor has demonstrated all security features, including but not limited to:			
		1. Software			
		2. Hardware			
		3. Encryption			
4	5.4	Vendor has demonstrated all available ancillary equipment:			
		1. Peripherals			
		2. Devices			
		3. Software			
5	5.5	Vendor has demonstrated the loading of a typical roster file provided by SBE.			
6	5.6	Vendor has demonstrated the correct integration of the imported roster file.			
7	5.7.a	Vendor has demonstrated: All available voter look-up paths			
8	5.7.b	Vendor has demonstrated: All available methods of voter ID verification			
9	5.7.c	Vendor has demonstrated the correct identification and presentation of a voter's individual ballot style.			
10	5.7.d	Vendor has demonstrated all of the fields for every type of Voter Record:			
		1. ACP			
		2. Permanent Assistance			
		3. Supplemental			
		4. Provisional			
		5. Any others available			

11	5.7.e	Vendor has demonstrated Voter Check-in types:			
		1. Success			
		a. Using KY DL/ID			
		b. Using voter look-up			
		2. Failure			
		a. Voter not found			
		b. Voter in other precinct			
		c. Et al.			
		3. Abandoned			
		4. Spoiled			
12	5.8.a	Vendor has demonstrated deployment configurations using multiple poll books: **With connectivity**:			
		1. Central server direct syncing, and			
		2. Peer-to-peer lateral syncing			
13	5.8.b	Vendor has demonstrated deployment configurations using multiple poll books: **Without connectivity**:			
		1. Peer-to-peer lateral syncing			
		2. Any other optional type available			
14	5.9	Vendor has demonstrated the election "**Open**" process including any features such as:			
		1. Procedures			
		2. Sign-offs			
		3. Reports			
		4. Auditing			
15	5.10	Vendor has demonstrated the election "**Close**" process including any features such as:			
		1. Procedures			
		2. Sign-offs			
		3. Reports			
		4. Auditing			

15	5.11	Vendor has demonstrated all summary and reporting features available on individual poll books.			
16	5.12	Vendor has demonstrated all troubleshooting and help features available on individual poll books.			
17	5.13	Vendor has demonstrated the ability to upload and download:			
		1. Data and/or files in Real-time			
		2. Delta files			
		3. System/software updates			
18	5.14	Vendor has presented a comprehensive overview of the Central Server and/or Administrative Console functionality, such as:			
		1. Election Management			
		2. Reporting			
		3. Data Analysis			
		4. Software Updating			
		5. Troubleshooting			
		6. Equipment Deployment Tracking			
19	5.15	Vendor has demonstrated any other pertinent functionality or features not specifically listed.			
20	NOTE				
21	NOTE				
22	NOTE				
23	NOTE				