CDOS Certification Number: 2007-CDOS-HAR-001-0404
Manufacturer: Hart Intercivic
Application Date: 04/04/2007

Test Number

BA4-P3 - 406
2007-CDOS-HAR-001-0404

Purpose:
The purpose of this test is to verify that the voting system provider shall implement an access control system of least privilege. The operating system administrative account shall not have access to the database or the database administrative password.

Test Procedures:
Verify different users for operating system and voting system. See BA4-P3-401

Prerequisites:

Variance Used During Testing:
n/a

Test Expected Outcome:
The voting system security architecture allows for completely separate OS and DB accounts that do not have the ability nor knowledge of each other's passwords.
The test log shall contain procedural steps used to conduct and evaluate the tests. At a minimum, these procedural steps shall include any items related to the setup, start, process, measurements, shut down, resetting, stop and restoring the system as necessary.
Additional Observations and Findings

Observations:
Voting system uses a proprietary database system which is unavailable to other users.

11-21-07 Addendum:
Certification testing board requested documentation from the vendor verifying accessibility of the database by the system administrator and has not received that documentation.

Findings:
Voting system does not meet the requirements of this test.
State of Colorado
Department of State
1700 Broadway
Suite 250
Denver, CO 80290

Mike Coffman
Secretary of State

Holly Lowder
Director of Elections

CDOS Certification Number: 2007-CDOS-HAR-001-0404
Manufacturer: Hart Intercivic
Application Date: 04/04/2007

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The voting system shall meet the following requirements for password security: Password to database shall be owned and only known by application.

**Purpose:**
The purpose of this test is to verify that the password to the database is known only by the application.

**Prerequisites:**
Completion of trusted build, documentation by voting system vendor.

**Test Procedures:**

**Variances Used During Testing:**

Access to the voting system database will be restricted by the use of a password that is known only by the voting system application.
The test log shall contain procedural steps used to conduct and evaluate the tests. At a minimum, these procedural steps shall include any items related to the setup, start, process, measurements, shut down, retrieving, stop and restoring the system as necessary.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Operator</th>
<th>Test Log</th>
<th>Activity and Duties</th>
<th>Incident Reports</th>
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### Attachments
- **Documents** (list all documents): No [ ] Yes [ ]
- **Videos** (list all videos): Yes [x]
- **Photos** (list all photos): No [ ] Yes [ ]

- Video from 1/13/07

### Acceptable Compensating Controls

#### Results Summary
- **Final Test Status**: FAIL

#### Test Does Not Meet Expected Outcome

**1st Review**: Jerome Lovato
- Printed name: Jerome Lovato
- Signature: [Signature]
- Date: 11/3/07

**2nd Review**: Danny Cassea
- Printed name: Danny Cassea
- Signature: [Signature]
- Date: 11/3/07

**Supervisor Approval**: John Gardner
- Printed name: John Gardner
- Signature: [Signature]
- Date: 11/3/07
Additional Observations and Findings

Observations:
The testing board is unable to specifically locate the password to make a final determination and supporting evidence of this test case. Additional information from the manufacturer is required.

11-29-07 Addendum: The testing board requested additional information that was not provided by the vendor within the required deadline. See video record from 11/19/07. The vendor requested submitting the documentation beyond the deadline and was refused by the Secretary.

Findings:
Voting system does not meet the requirements of this test.
CDOS Certification Number: 2007-CDOS-HAR-001-0404
Manufacturer: Hart Intercivic
Application Date: 04/04/2007

Test Number

BA4-P3 - 413
**Purpose:**
The purpose of this test is to verify that the voting system shall contain a unique system user account with permissions described herein.

**Prerequisites:**

**Test Procedures:**
See BA4-P3-401

**Variance Used During Testing:**

The voting system security architecture allows for class/subclass accounts based on least privilege and role based access. User/Operator accounts have no access to system root directory.
The test log shall contain procedural steps used to conduct and evaluate the tests. At a minimum, these procedural steps shall include any items related to the setup, start, process, measurements, shut down, restarting, stop and restoring the system as necessary.
Additional Observations and Findings

Observations:
See BA4-P3-401, BA4-P3-403, BA4-P3-409. In the windows environment the test restriction requirements are possible.

11-21-07 Addendum: During the above listed tests a unique user account was created and tested for this requirement.

Findings:
Voting system meets the requirements of this test.
State of Colorado
Department of State
1700 Broadway
Suite 250
Denver, CO 80290

Mike Coffman
Secretary of State

Holly Lowder
Director of Elections

CDOS Certification Number: 2007-CDOS-HAR-001-0404
Manufacturer: Hart Interliciv
Application Date: 04/04/2007

Test Number

BA4-P3 - 414
The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: A unique System User/operator account shall be created for operating system use that is restricted from the following aspects of the operating system: No access to operating system specific folders.

**Purpose:**

The purpose of this test is to verify that the voting system shall contain a unique system user account with permissions described herein.

**Test Procedures:**

See BA4-P3-401

**Prerequisites:**

- n/a

**Variance Used During Testing:**

- n/a

The voting system security architecture allows for class/subclass accounts based on least privilege and role based access. User/Operator accounts have no access to OS specific folders.
The test log shall contain procedural steps used to conduct and evaluate the tests. At a minimum, these procedural steps shall include any items related to the setup, start, process, measurements, shut down, restarting, stop and restoring the system as necessary.

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| Documents (list all documents) | No [ ] | Yes [ ] | Videos (list all videos) | No [ ] | Yes [ ] | Photos (list all photos) | No [ ] | Yes [ ] |

| Acceptable Compensating Controls |

### Result Summary

**TEST MEETS EXPECTED OUTCOME**

<table>
<thead>
<tr>
<th>1st Review</th>
<th>2nd Review</th>
<th>Supervisor Approval</th>
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<tr>
<td>T. Bishop</td>
<td>Manager L. Cowen</td>
<td>John Gardner</td>
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- Pass
Observations:
See BA4-P3-401, BA4-P3-403, BA4-P3-409. In the windows environment the test restriction requirements are possible.

11-21-07 Addendum: During the above listed tests a unique user account was created and tested for this requirement.

Findings:
Voting system meets the requirements of this test.

1st Review

T. Bishop
Printed name

2nd Review

Michael L. Chudzinski
Printed name

Supervisor Approval

John Gardner
Printed name

Signature  Date

11/26/07  11/27/07  11/30/07