

UNISYN VOTING SOLUTIONS, INC.

**OpenElect Central Suite
Election Manager
Release 1.0**

Election Manager User Guide

**Document Number: 04-00427
Version 1.7**

OpenElect Voting System Election Manager User Guide

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INTERNATIONAL LOTTERY & TOTALIZATOR SYSTEMS, INC [™]
2310 Cousteau Court, Vista, CA 92018-8346 USA
(760) 598-1655 • FAX (760) 598-0219

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Approvals and Acknowledgements

| | | |
|---|--|------------------------------|
| Chris Ortiz, Director, Business Development | McDermot Coutts, Technical Development Manager | Jens Jensen, Project Manager |
| | | |

For questions about this document please contact:

Chris Ortiz
Director, Business Development
Email: cortiz@ilts.com
VotingInfo@ilts.com

Document Revision History

| Date | Version | Release | Description |
|------------|---------|---------|---|
| 01/07/2009 | 1.0 | 1.0 | Initial Document for Release. |
| 04/08/2009 | 1.1 | 1.0 | Added Installation Instructions |
| 04/28/2009 | 1.2 | 1.0 | Updates to add functionality definition |
| 05/18/2009 | 1.3 | 1.0 | Formal Release to Certification |
| 06/16/2009 | 1.4 | 1.0 | Various corrections to meet standards |
| 08/10/2009 | 1.5 | 1.0 | Updates to document to correct issues identified. |
| 10/10/2009 | 1.6 | 1.0 | Updates to correct issues identified. |
| 12/01/2009 | 1.7 | 1.0 | Updates to Sound production |

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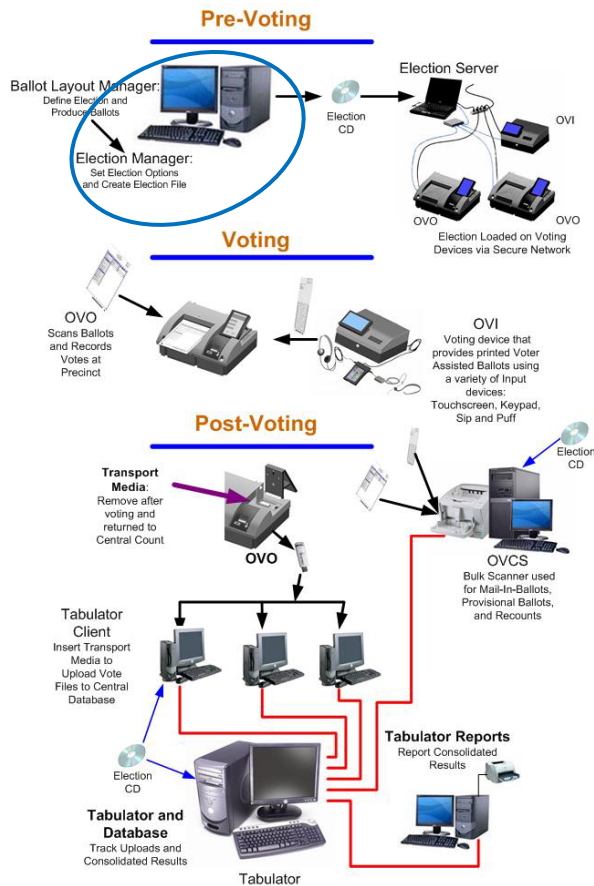
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1 Overview

1.1 Overview

The Election Manager (EM) is the second step in preparing an election for the OpenElect Voting Devices (OVD consist of the OVO and OVI) and the OVCS. The Election Manager converts the Unisyn election definition file to a Unisyn-specific XML format, and prepares compressed, encrypted election files for output to CD-ROM. The EM allows the jurisdiction to add voting device specific options for elections: which contests to check for undervotes, whether to allow or disallow certain features, maintenance technician passwords, and other options. The EM produces the CD with encrypted, compressed files that are used to load the election onto the voting device.



1.2 Applicable Documents

- OVS System Overview
- OVS Acronyms
- Ballot Layout Manager User Guide
- Election Server User Guide
- Tabulator Client User Guide
- OVCS User Guide
- Tabulator User Guide

1.3 About This Guide

This guide provides information and instructions on using the Election Manager (EM) program to load the Election XML file created via the Ballot Layout Manager (BLM), select election options, and to produce the election that will be loaded onto the OVDs, Tabulator and OVCS. It will also be used by the Tabulator Client.

1.4 Installing and Updating

1.4.1 Linux OS

The Linux OS installation is an automated install requiring minimal interaction from the installer. The Linux OS needs to be installed only once on the PC. So if it has been already installed for another application, this step can be skipped and proceed to the Installation of the Election Manager.

A special user login/password is supplied with the Linux OS installation materials for use during this process.



IMPORTANT

This Linux OSS Installation password should be restricted and protected from all but the system administrator.

Upon starting installation, a kickstart file is read that tells: what password encryption to use, where to install the bootloader, type of visual install (graphical), base firewall setup, installation media (DVD), disk partitioning scheme, and what packages are to be installed. At the end of the kickstart file an OCS install script is run. This script customizes the system even further by installing/setting up: MySQL, Apache-Tomcat, Java, fonts, OCS application directories, OCS application software, users, permissions, security, graphical desktop, desktop shortcuts, service on/off states, and system parameters.

1. Set the system BIOS to boot from DVD.

This requires a special BIOS password that can be obtained from Unisyn. If the BIOS does not have a password set, you should set a BIOS password before leaving the BIOS. The password should consist of intermixed multiple upper and lower case letters with numbers.



IMPORTANT

The BIOS password should be restricted and protected from all but the system administrator.

2. Insert OCS Installation DVD.
3. Boot the system, and press Enter when you receive the installation message that asks you to confirm the installation.
4. When the “Congratulations...” appears remove the DVD and reboot.
5. The PC BIOS should then be changed back to Boot only from Internal Hard Disk.
6. The system should be in a production state.

The Election Manager resides on the same PC as the Ballot Layout Manager. It is recommended that Linux and the Ballot Layout Manager be installed on the PC first, followed by installation of the Election Manager.

1.4.2 Election Manager Installation and Updating

To install Election Manager, the following are needed:

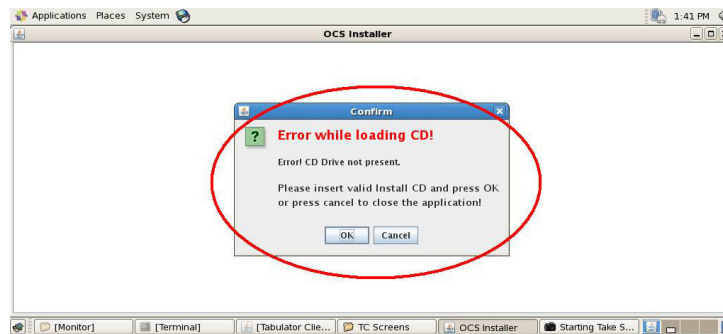
- OCS release installation CD.
- A USB drive that has OCSInstaller application copied in its root directory.
- The registration key for the Election Manager.

Steps to install:

- 1) Log onto Linux system as a “root” user. Access to the “root” login/password should be restricted and not available to OCS Superusers or Admin users. This is a special access that should not be used other than to install OCS applications.
- 2) Insert the OCS installation CD and the OCSInstaller USB drive to the Linux machine.

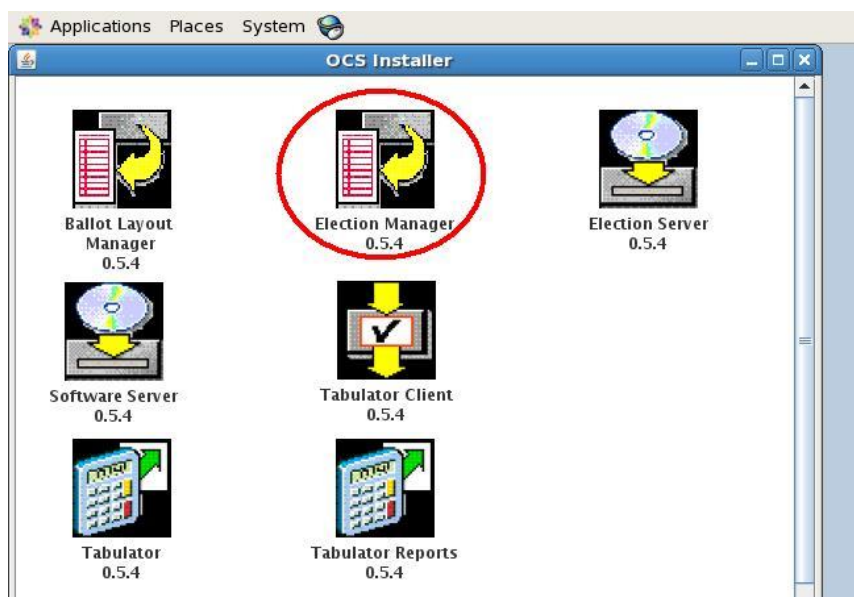


- 3) Double click the OCS Installer icon on desktop. The OCSInstaller program will read the CD and open a window with an icon for each application on the CD. If a CD is not present, the following screen will be displayed:



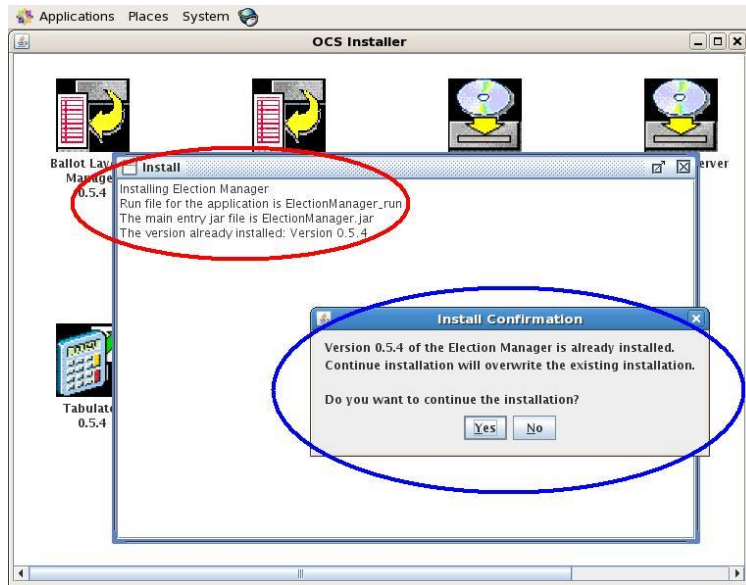
In response, insert the CD, wait a couple of seconds and click OK.

- 4) Install the Election Manager by clicking on the Election Manager icon on the OCS installer screen.

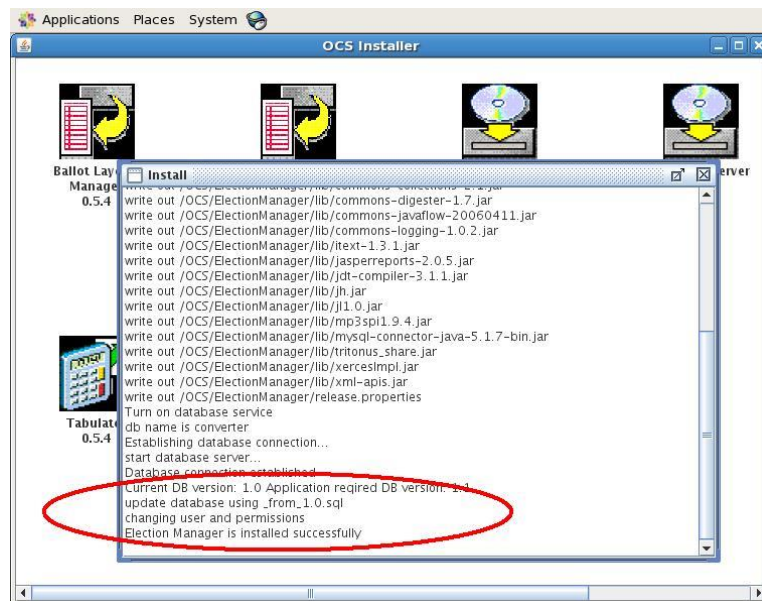


A second smaller window is open and it shows the unzip process of the application file.

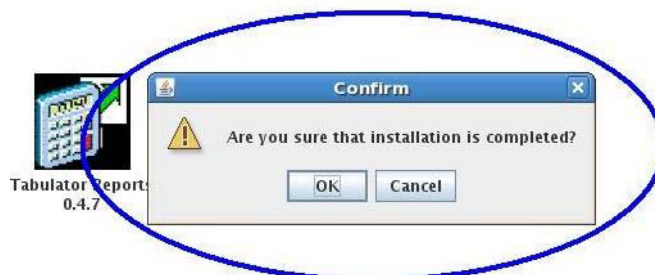
If the installation is a reinstall over an existing version, a popup screen asks for confirmation of loading the new release.



The last message in the window shows if the application installation is successful. The Election Manager application is installed in /OCS/ElectionManager/ directory.



- 5) Terminate OCS installer application. Use the 'x' button on upper-right corner of the application screen to terminate the OCS installer application.
- 6) The System will ask if the installation is complete.



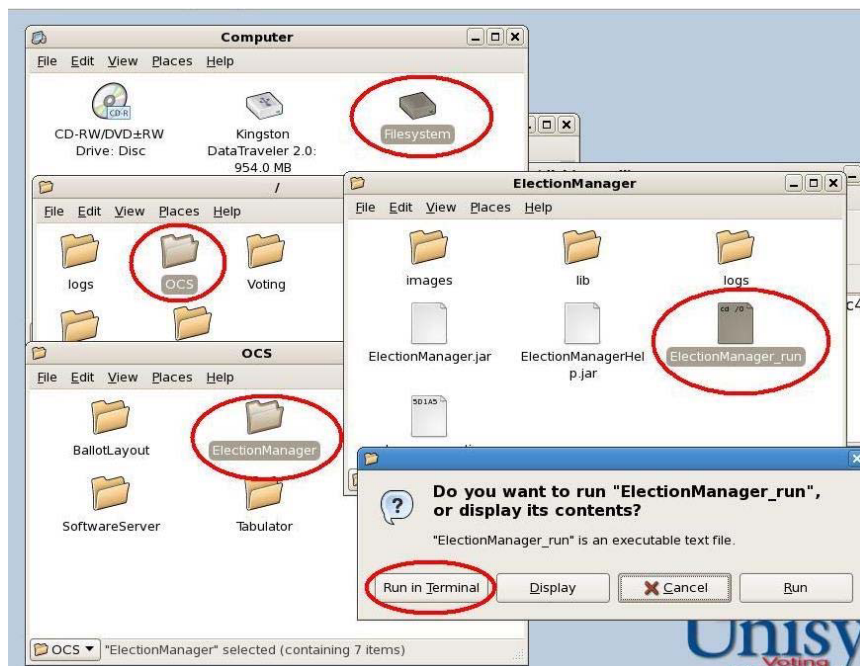
- 7) Run the Election Manager application.

Go to the Election Manager installation directory by typing the following command in the terminal window:

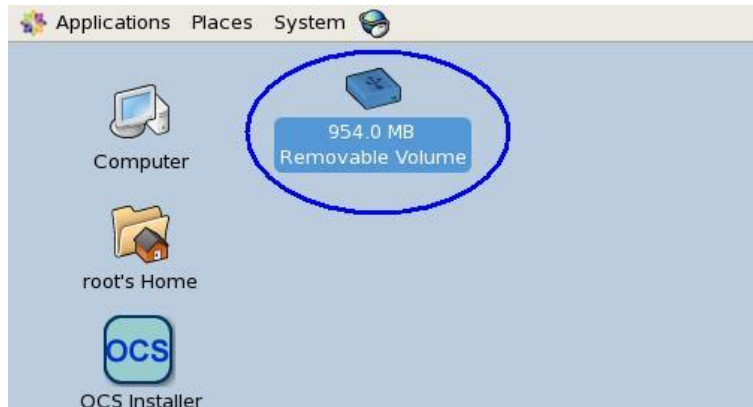

```
cd /OCS/ElectionManager/
```

Start the application:

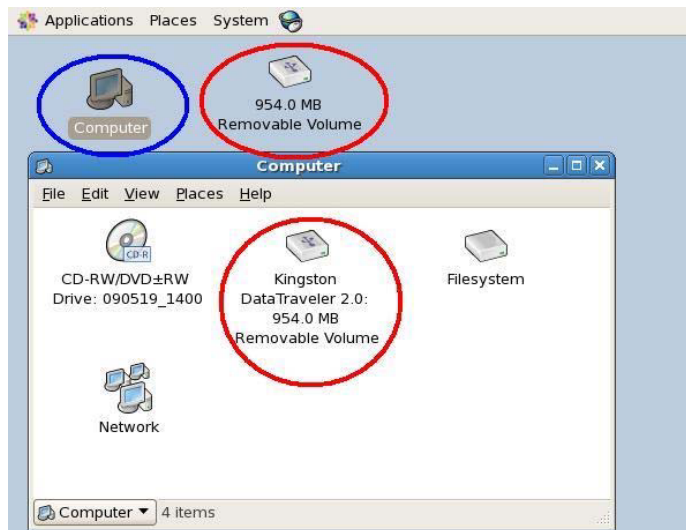
```
./ElectionManager_run
```



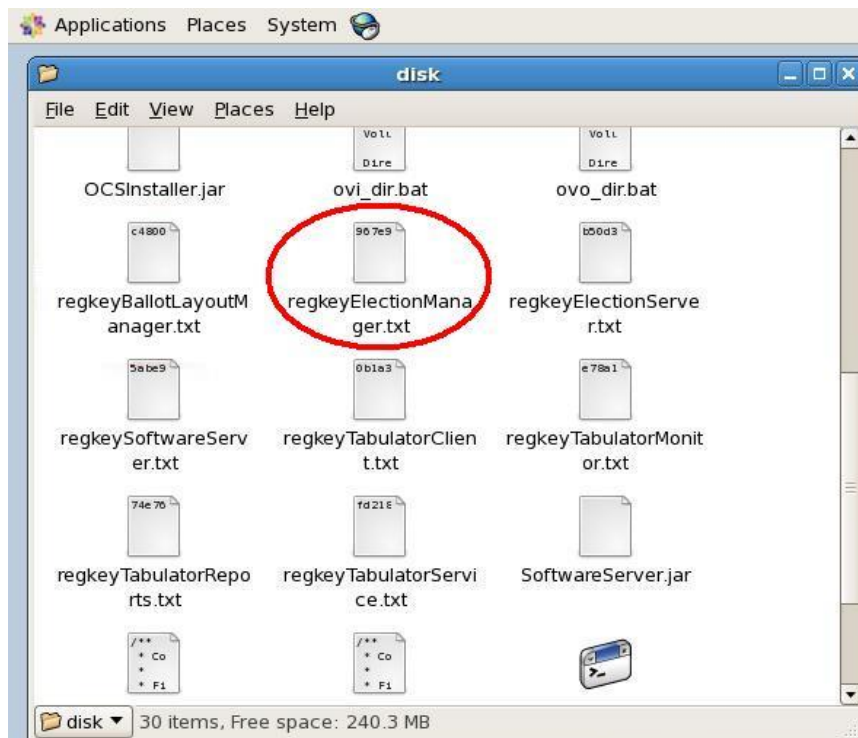
- 8) When the Election Manager application first runs, it prompts the user to enter the registration key. To obtain the Registration key, follow the instructions below:
1. When you inserted USB drive that has OCSInstaller application and the Registration Key file, an ICON appears as shown in the diagram below:



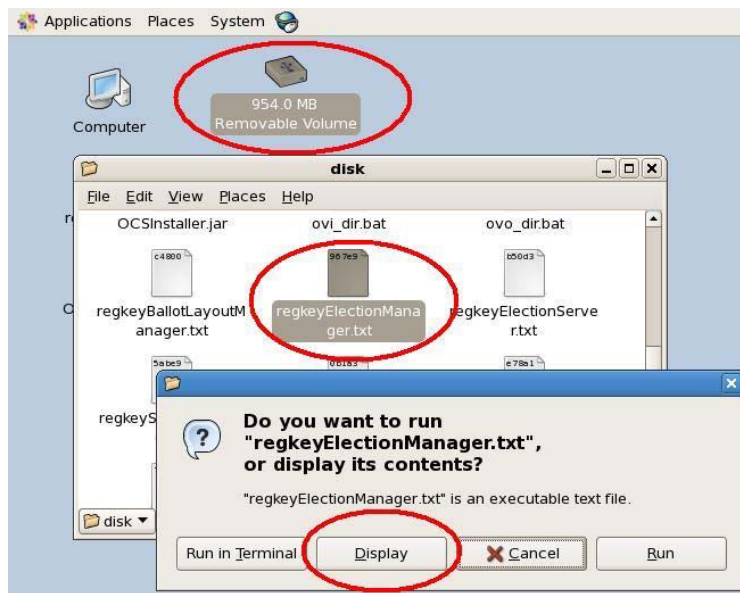
2. You can double click on this ICON, right click on the ICON and selection OPEN, or you can Open the COMPUTER ICON as below and double click/open on the removable volume there.



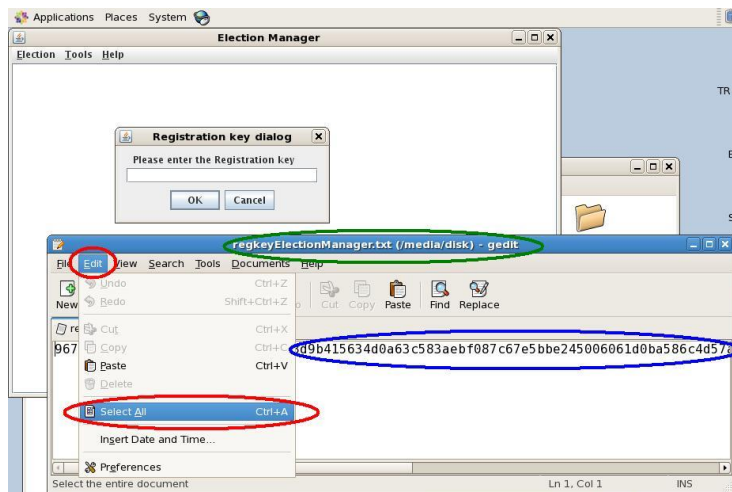
- When the folder opens, it will display multiple files, scroll down to the “regkeyElectionManager.txt” file. This text file contains the Election Server Registration Key (which is valid only for 1 month from its creation date).



4. Open the file by Double Clicking on the file ICON, or right clicking on the ICON and then clicking OPEN. This will result in the following window opening. Click on DISPLAY as circled below:



5. The Registration Key file will open as is shown below. You should then select the entire contents of the Key (which extends to the right more than is displayed). This is done by Clicking on EDIT/SELECT ALL (as shown below) or by clicking Ctrl+A. This results in the key being selected.



6. Copy the key contents into the exchange buffer via (Ctrl+C). The key is longer than might be displayed (note scroll bar at bottom of the window), make sure you copy the entire key.

Switch back to Election Manager Application Window and paste the key (Ctrl+V) into registration key dialog box, click OK.



- 9) The application will then prompt for login. Disregard this and click "Exit".
- 10) This concludes the Election Manager installation. Close the terminal window. From 'Computer' browser window, right click on USB drive icon, click 'Unmount Volume'. This unmounts the USB drive. From 'Computer' browser window, right click on CD-ROM, click 'Eject'. This unmounts and ejects the OCS installation CD.

Be sure to follow procedures for certification and acceptance of new software components.

Once you have completed installation (including sections 1.6 (if required)), log off as “root”. The OCS applications should not be run as “root”. Log in as “administrator” or “operator” to run the Election Manager application.

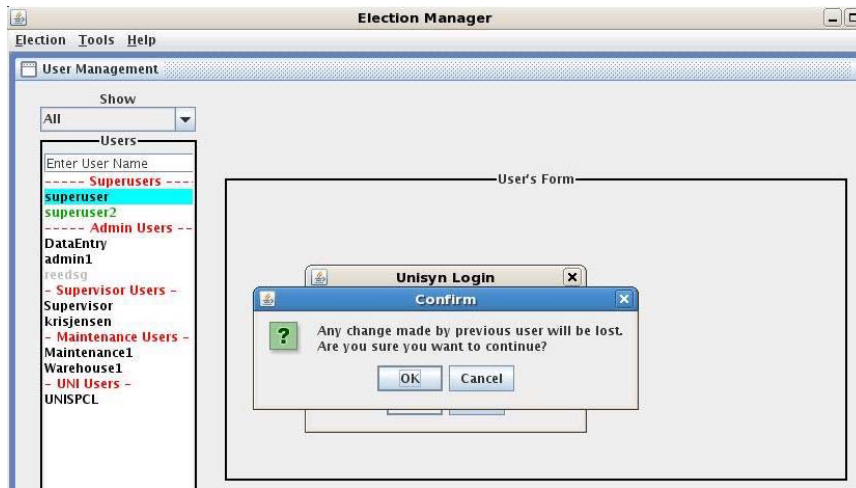
1.5 Security

The Election Manager Application security allows users to perform functions based on their roles and the state of the current election. In order to access the application at any level, a user inputs a user name and password. If this information is validated, the user's role(s) are retrieved and used to activate or deactivate menu item.

In addition to the user role, the state of the application is managed in order to control some functionality. The application state takes precedence over user roles. This means that even if the user's role states that they can perform a function, but the application indicates that the function cannot be performed in the current state, then the function is unavailable.

To maintain security, follow these procedures when using the Election Manager:

- Allow only authorized personnel access to election preparation equipment, including the PC where the Election Manager is installed.
- Keep the room where computer equipment is located locked. Limit any local network to the immediate physical area. Set up the PC to require Operating system login.
- Give each user a unique password (logins are tracked by the application log) and have users safeguard their passwords. Only authorized users may access the Election Manager application. All EM application users require a password change on first login, and every 6 months thereafter.
- Prohibit unauthorized use of media or transference of data to and from the OCS election computers (via CDs, USB devices, disks, or LAN access, etc.).
- If the application is left unused for a period of time (15 minutes) the application will time out and force the user to log into the application again. All changes will be retained (but not saved) until the user or one of equal or higher role logs in to commit the changes to the database. If the system is exited, without login, the changes are lost.
- Establish user roles and provide Superuser, Admin, Supervisor, and Maintenance passwords only to qualified and fully trained personnel. Adhere to limited and careful distribution of passwords, Passwords should be carefully distributed and guarded by their owners.



- Change passwords frequently. Use the original user login (supplied with the system) to open the program, then define a new Superuser, and then it is recommended to delete the initial account. See [Define a New Superuser](#) in section 1.9.

To define secure passwords:

Use this standard for all Election Manager Superuser and Admin passwords:

- 7-15 characters, case sensitive
- Containing at least one letter and one number, and using no spaces.

1.6 Requirements

For a list of system requirements, please refer to the *OCS System Overview*.

1.7 General Interface Information

While interacting with the application, the user may be presented with an Error Message (such as invalid entries or entry information too long). Appendix A (User Interface Error Messages) provides the error messages that can be presented, the reason for the message, and the actions that are recommended to be taken. Please refer to Appendix A when presented with an error message during operation.

Information entered by the user is typically limited in size and contents depending upon the characteristics of the information entered (from Precinct Name to DTS Party ID). Please refer to Appendix B (EM System Limits) for specific format and size limitations for specific fields.

When an “Add” button is clicked on a information entry form (such as District Type, Party, Candidate, Instruction, Measure, and Contest) the Add action is confirmed to the user by adding the new entry to the list of like items either to the left of the information form (for District Types, Parties, Measures and Contests) or above the information form (in the case of candidates).

When a “Delete” button is clicked, the system will prompt the user to confirm the action with a pop-up display. The user is asked to confirm the deletion/removal with an OK, or either Cancel the request (by clicking a Cancel button) or No.

When a “Save” button is clicked on a display (to change the information for an entry), confirmation is provided to the user in the form of updating the data in the fields on the screen (such as candidate name).

When you have entered information on a form and have not clicked “Save” and you request the system to navigate away from that screen or close the election where the information will be lost, you will be presented with the following popup:



If you click “Yes” on the confirmation screen, the system will navigate away from the current screen (set of information) and the changes you entered will be lost. If you click “No”, the system will remain on the current screen and your navigation request will be ignored.

If an application is left unused for a period of time (15 minutes) the application will time out and force the user to log into the application again. All changes will be retained (but not saved) until the user or one of equal or higher role logs in to commit the changes to the database. If the system is exited, without login, the changes are lost.

1.8 Getting Started

You will need to first log into Linux following the booting of the PC. The Election Manager application can be run while logged in as “administrator” or “operator”.

The “administrator” or “operator” Linux logins are allowed to run all the OCS applications (operator is however restricted from the Software Server application). Once you log in as “administrator” or “operator” the desktop will have ICONs for all the OCS applications that are loaded on that PC.

To run the Election Manager application, double click on the EM icon.



! IMPORTANT

The Election Manager and the Tabulator Client cannot be running at the same time on the same PC. When you start up the Election Manager, it will check to see if the Tabulator Client application is running, if so, the following error will be displayed. Once you click OK, the application will exit. To run the Election Manager, exit the Tabulator Client and then restart the Election Manager application.



When you start the Election Manager, a password prompt appears. Two types of users may login to the Election Manager: EM Superuser and EM Admin users. The Username/Passwords are unique to the Election Manager.

To log in:

Type your username and password and click Enter.

If the login is inaccurate, a message appears: "Sorry, the username or password you entered is invalid, please try again." Press OK to return to the login box and re-enter these fields.

The user's password will expire after 6 months. If the password has expired, the user will be prompted to enter a new password.

Login Prompt

Primary Election
May 5, 2009
(102)

General Election
Nov 5, 2012
(300)

Election Manager Login

Username
superuser

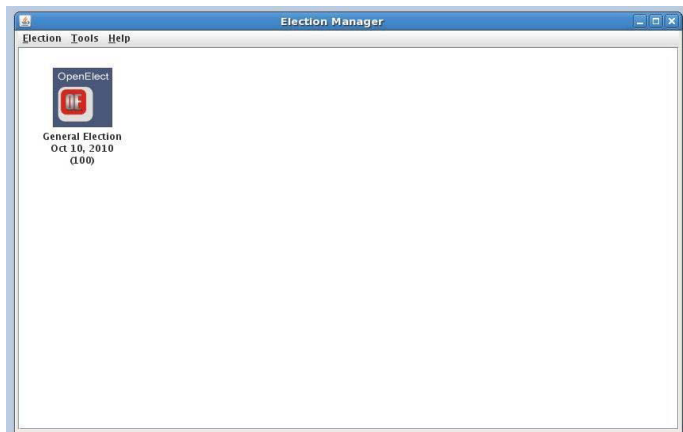
Password

Enter Exit

The first time a new user logs in; you will be requested to change your password for security purposes. The following screen will be displayed. Enter your new password twice.



Upon successful login, the Election Manager desktop appears. If no elections have been loaded, the Election Manager desktop is blank. The desktop will remain empty until you [create a new election](#). Elections appear as icons on the desktop. Labels below the icons include the election type (General Election or Primary Election), the election ID, and the election date.



You will follow a series of steps described in this manual to prepare an Election CD.

To prepare an Election CD:

1. Load the election.enc file (created via the Ballot Layout Manager) into the Election Manager. See Creating a New Election.

2. Set [options](#) for the election, for the audio, and for printed reports at the polls.
3. Produce Audio Script and Ballot Proof reports as needed to check the election.
4. Upload all required MP3 [sounds](#) for the audio ballot to the Election Manager.
5. Define at least one Maintenance Technician [user](#) and one Supervisor user for the election.
Note the Election Password
6. [Export](#) the election to a directory.
7. Burn the election directory on a CD.

1.9 Define a New Superuser

The Election Manager is provided with a default Superuser account. By default the system forces at least a change in the default Superuser password at first login. The first time you open the Election Manager, you will use the default Superuser account. For security, you should immediately define a new Superuser account after logging in with the default account.

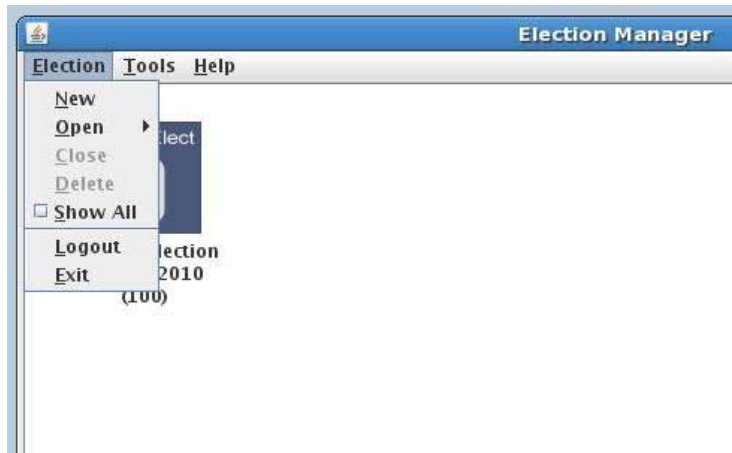
To define a new Superuser account:

1. Open the Election Manager **Tools** menu and Select **User Management**.
2. Add a new user (Superuser Role), following the instructions in Creating a New User.
(Refer to section 9.4)
3. Open the **Election** menu and select **Logout**. The login prompt reappears.
4. Log in using your new account and begin setting up the election as described in this user guide.

1.10 Menus

The following sections describe the menus in the Election Manager application.

1.10.1 Election Menu



New

The New menu selection is available when there is not already an election open. Displays a dialog that allows you to browse and select an election.enc file. (Refer to section 2.2)

Open

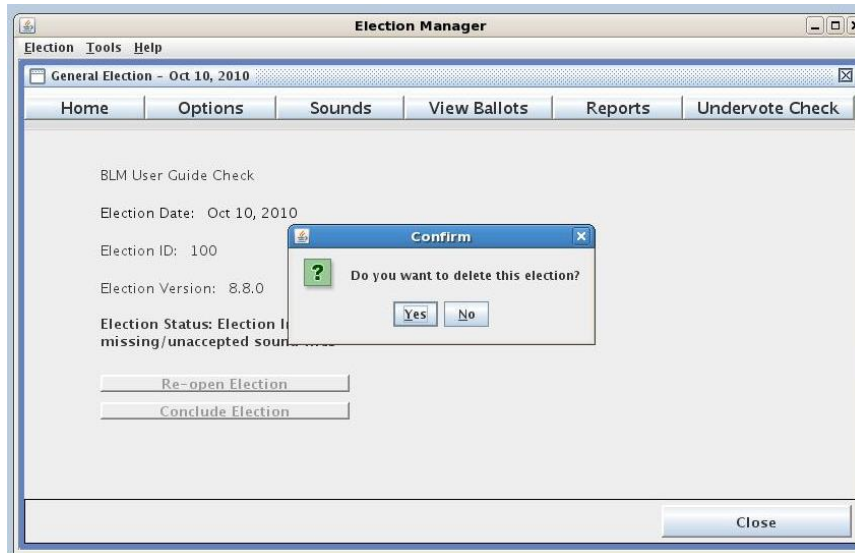
Open one of the elections displayed on the desktop. Only one election at a time can be open. (Refer to Section 2.3)

Close

Close the open election. (This selection is not available unless an election is open.) (Refer to Section 2.4)

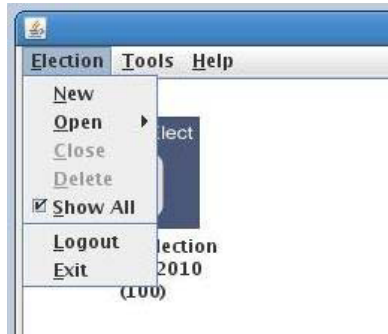
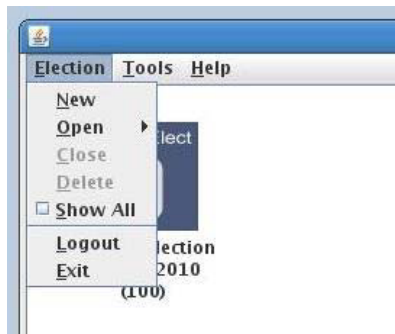
Delete

Available when an election is open. Delete the current election following confirmation. (Refer to Section 2.5)



Show All

A supervisor only can select this option to turn on/off the display of concluded elections. When the Election menu is displayed, the Show All option has a checkbox. If there is a check in the box, the past elections are being displayed, if there is no check, past elections that have concluded are hidden from view. (Refer to section 2.6)



Logout

Logs out and displays the login prompt. (Refer to Section 1.11)

Exit

Closes the application. (Refer to Section 1.11)

1.10.2 Tools Menu



Backup Election

Perform a backup of the open election. (This selection is not available unless an election is open.) (Refer to Section 11.3)

Restore Election

Performs a restoration of a specific Election. All current Election data (for the restored Election ID) is replaced with the restore, if the election ID exists in the database. (This selection is not available if an election is open.) (Refer to Section 11.3)

Export Training Election

Available when criteria for exporting the election have been met. This export creates a directory of Training Election files from the current election data. A training election can open voting for training purposes only on any day. (Refer to Section 8.1)

Export

Available when criteria for exporting the election have been met. Export creates a directory of election files from the current election data. (Refer to Section 8.2)

Machine Logs

Allows you to view and search OVO and OVI logs uploaded from Transport Media (TM). (Refer to Section 11.1)

TM Maintenance

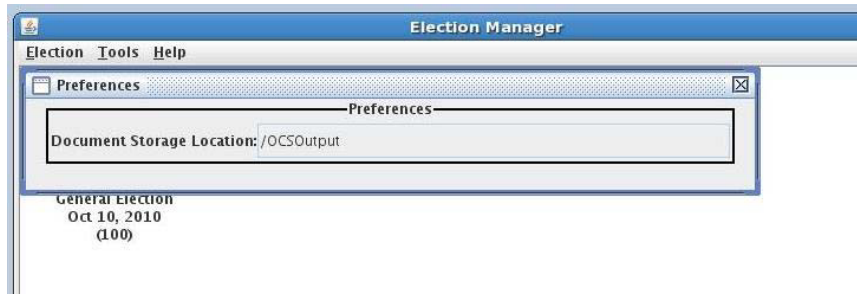
This feature allows you to upload OVO and OVI machine logs and clean the TM of all vote and log files. (Refer to Section 10)

User Management

This feature allows you to add users, set user roles, and deactivate user accounts. (Refer to Section 9)

Preferences

Presents in a popup window the Document Storage Location. This location is where documents created by the EM application will be stored on the PC. This field is informational only. You exit the popup window by clicking the X in the upper right corner of the window.



1.10.3 Help Menu

Help Topics

This selection presents Help Topics to aid the user. Refer to section 11.4 for details on the help interface.



About Unisyn

About Unisyn displays the Application Version number and the Linux OS Version number: (Refer to Section 11.5)



View Logs

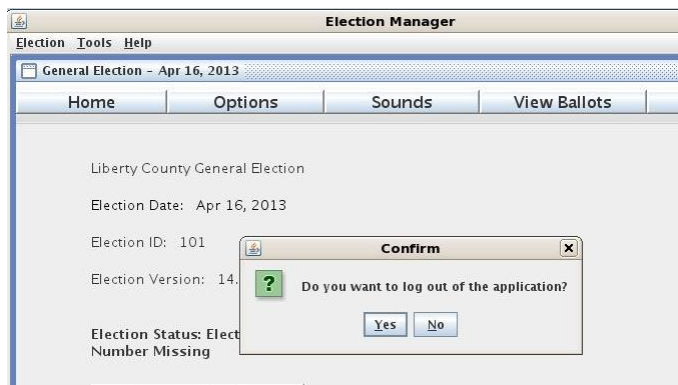
Opens a viewer for viewing the Election Manager Application Log, which tracks activity in the program. (Refer to Section 11.2)

1.11 Logout and Exit

You can log out of the Election Manager without exiting the program in order to allow another user to login.

1.11.1 Logout

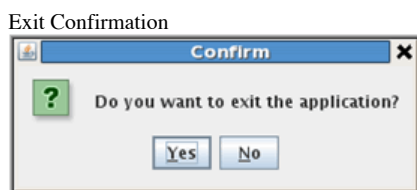
1. Open the **Election** menu and select **Logout**.
2. When the confirmation window appears, click **Yes**.



3. When the login window reappears, another user may log in.

1.11.2 Exit Program

1. Open the **Election** menu and select **Exit**, or
Click the close box (X) in the upper right corner of the application window.
2. When the confirmation window appears, click **Yes**.



3. A prompt to save changes (see below) will appear if an election is open and changes have been made. Click **Yes** to save changes, **No** to cancel changes and continue exiting, or **Cancel** to cancel exiting.



4. The program closes.

1.12 Handling System Failures

The following information provides you with how to handle system failures and recovery from abnormal system states.

Database Start Failure

If the database service fails and the application requires a connection to the database, the system will present the operator with a popup indicating that the database is unavailable.

Power off the PC, wait 12 seconds and then restart the system to start the database service. If this fails then call Unisyn for additional diagnostics

Database Corruption

If the data within the database has been corrupted, such as tables missing, the system will either display an error when needed data is accessed, or will display invalid data. A restoration of the data from a previous version through the restore interface will correct this problem.

For the EM, the backups are of individual Elections. Restoration of an individual election might solve the problem or you may need to restore the entire database. If the entire database, you will need to restore every past or concluded election that is wanted to be on the machine. You will have to restore the latest backups of the pending and current election. The history of past logins and password history are lost with the reload of system. You will need to reenter EM Superusers and Admin users and enter new passwords. The EM users will be forced to change their passwords on their next login.

Executable Corruption

If the application binaries are corrupted the application will not execute or perform as expected. The applications should be reinstalled from the installation disk.

OS Corruption

If the Operating system has been changed such that the applications cannot execute or the system will not allow access to the user interface, the operating system should be restored from the installation disk and the applications re-installed. The database will then need to be recovered from Backups.

For the EM, the backups are of individual Elections. You will need to restore every past or concluded election that is wanted to be on the machine. You will have to restore the latest backups of the pending and current election. The history of past logins and password history are lost with the reload of system. You will need to reenter EM Superusers and Admin users and enter new passwords. The EM users will be forced to change their passwords on their next login.

File Access Problems

Unable to write document: A failure can occur when the system attempts to write a report that has a version currently open on the system. This will result in an error indicating that the document could not be written to the target location. Closing the open document file and rerunning the report process will correct the issue.

2 Elections

2.1 About the Election File

The Ballot Layout Manager outputs an XML file with election ballot data. This file is provided in both text format and encrypted (.enc) format, but only the encrypted format file can be loaded into the Election Manager. Once the file is loaded into Election Manager, you may start selecting options, uploading Audio Ballot sound files, and preparing the election for export to an Election CD.

The file contains these values:

- Election title, ID, date and type (General or Primary)
- Ballot card type
- Whether straight-ticket voting is allowed
- Whether ballots are party-specific
- Whether "decline to state" ballots will be used for certain parties
- All districts, precincts and split precincts
- Contest, candidate, and party data
- Ballot styles with contest order and candidate rotation for each precinct
- Language translations supported for the election

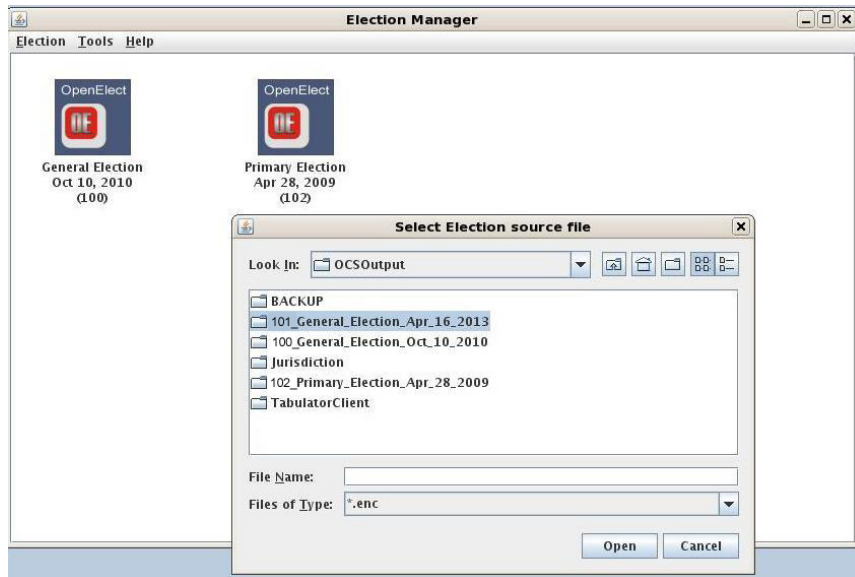
2.2 Creating a New Election

Either an Admin or Superuser can load the Election File to start a new election. Since the EM is running on the same computer as the BLM, you can go directly to where the BLM exports the *.enc files: /OCSOutput/election/EXPORT/XML folder.

To create a new election:

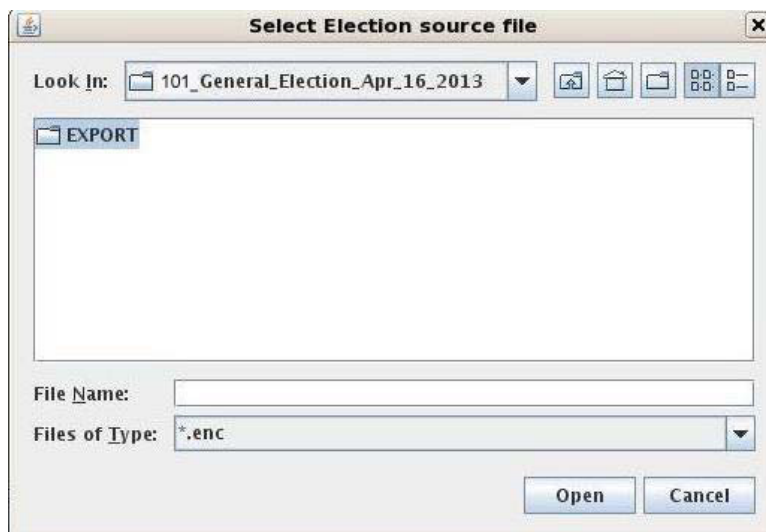
1. Open the **Election** menu and select **New**.

An Open window appears with the /OCSOutput directory displayed. Then browse to the election.enc file you wish to upload and select it. This is done by following the steps below:

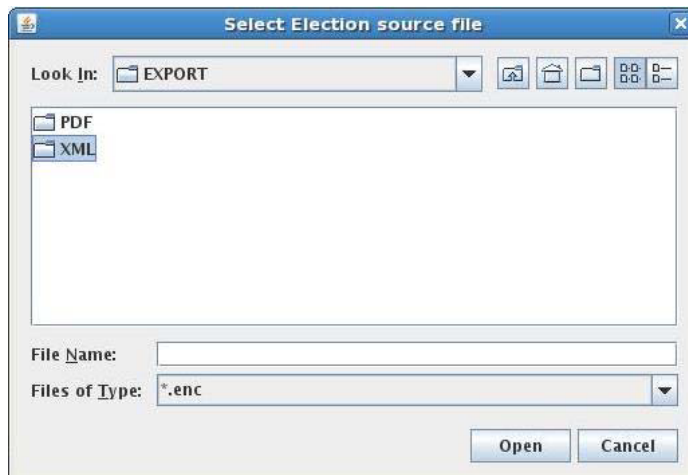


1. Select the Election folder with the name of the election that you wanted to imported. In the diagram above, there are three elections listed (one Primary and two General Elections). On your system, there may be only one election folder the first time you run the Election Manager, or as Elections are built, there could be many more intermingled with other files.

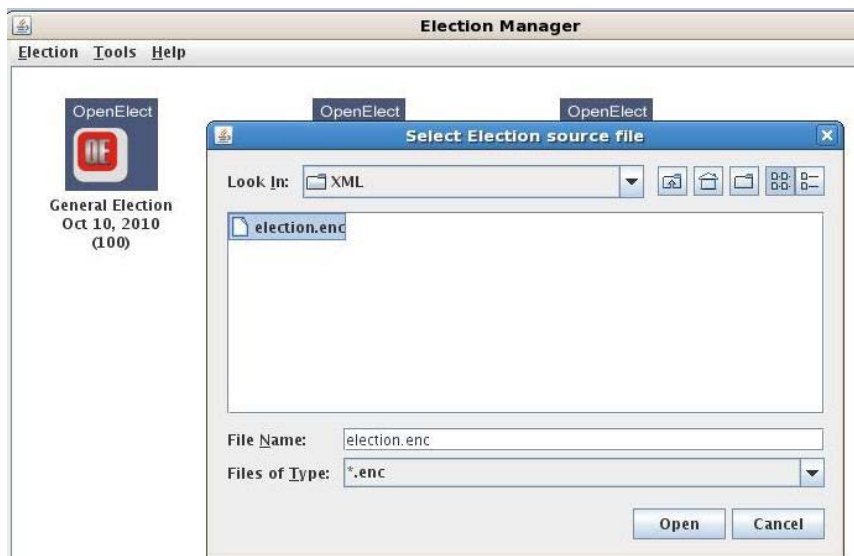
Once you have the Election selected (highlighted), Click Open and that election folder will open (as is shown in the diagram below). There will be no information on the form for File Name since there is no *.enc file yet.



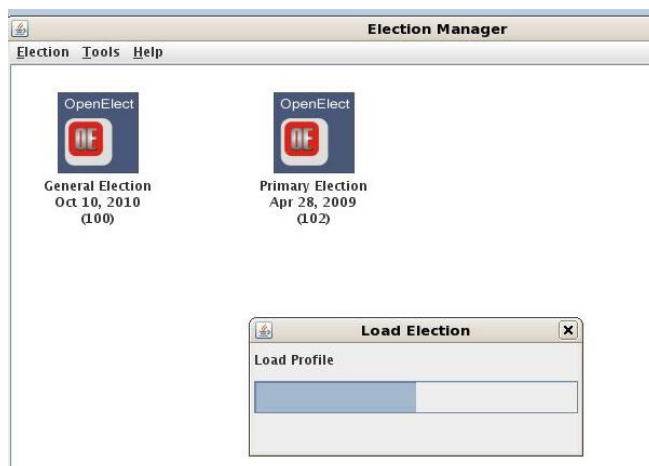
2. Now select and highlight the EXPORT folder, it may be the only sub-folder. With the EXPORT folder selected, click Open again and the EXPORT folder will open.



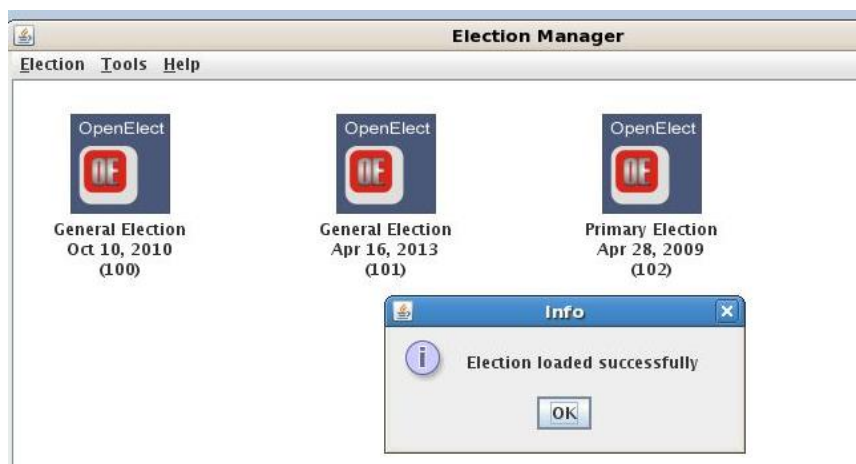
- Now select and highlight the XML folder. With the XML folder selected, click Open again and the XML folder will open. The **elections.enc** file will be in this folder. Click on this file and it will be highlighted and the name will appear in the File Name field at the bottom of the window (as is illustrated below).



- Now click Open again. The EM application will present progress information (as is shown below) as the import process is underway.

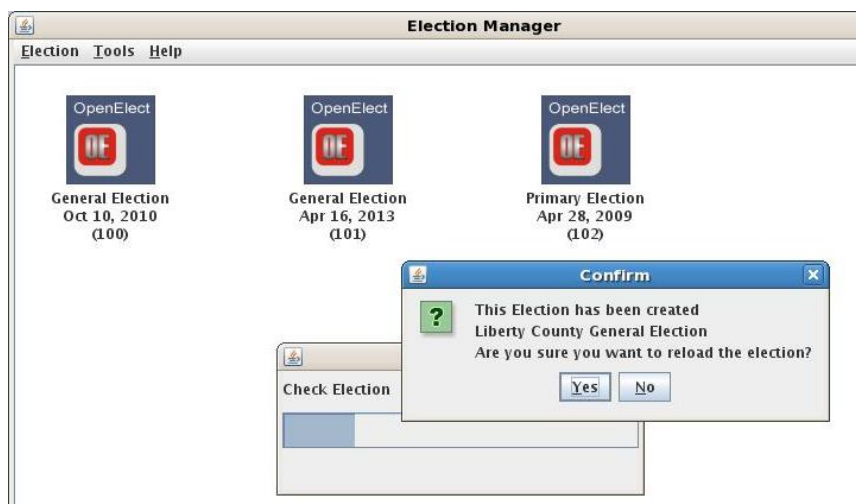


- Once the election is created in the Election manager database, the follow completion screen will be displayed and a Election Icon will be created for the imported election on the EM desktop.



- Click OK and the election has been imported successfully.

If during step 5 above the system detects that the election had already been created previous from the same file, the following display will be presented for confirmation by the user.



If you answer yes, the election will be re-imported replacing the previous Election file. However, any options you have set using the Election manager on the replaced version are kept. The EM recreation will only update the XML data produced by the BLM.

2. When the Election XMLfile loads successfully, an Election icon appears on the Election Manager desktop (if it did not already exist).

If an error message appears, produce new output from the Ballot Layout Manager, then open the **Election** menu and select **New** again to reload the file.

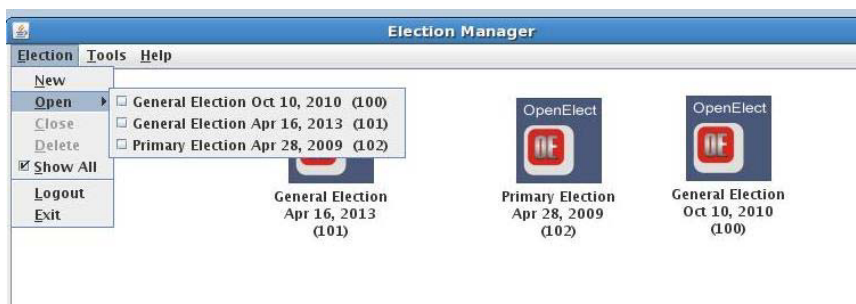
The Election Manager keeps track of reloaded elections and upgrades the election version with each loaded file that has differences.

2.3 Open Election

Although you can have several Election icons on the desktop, you can only work with one Election at a time. Opening another Election closes an Election that is currently open. To open an Election:

1. Double-click an Election desktop icon, or

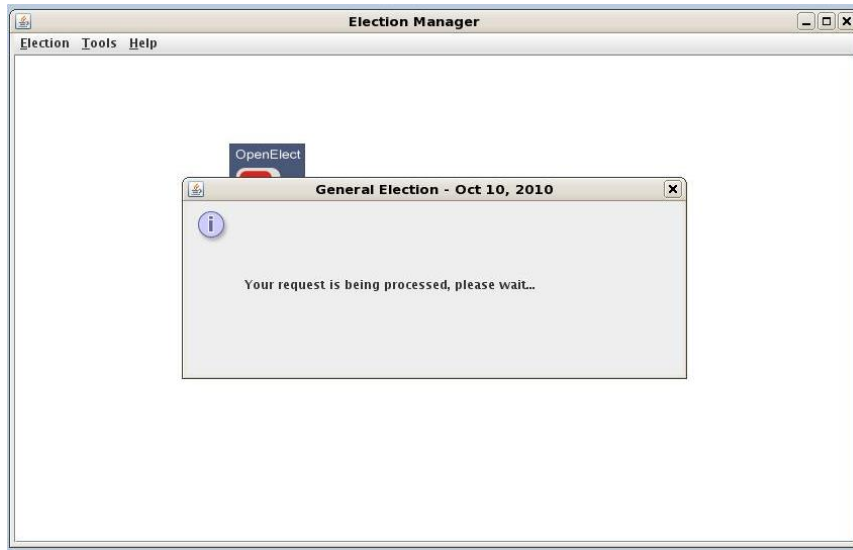
Open the **Election** menu, select **Open** and the Election title, or



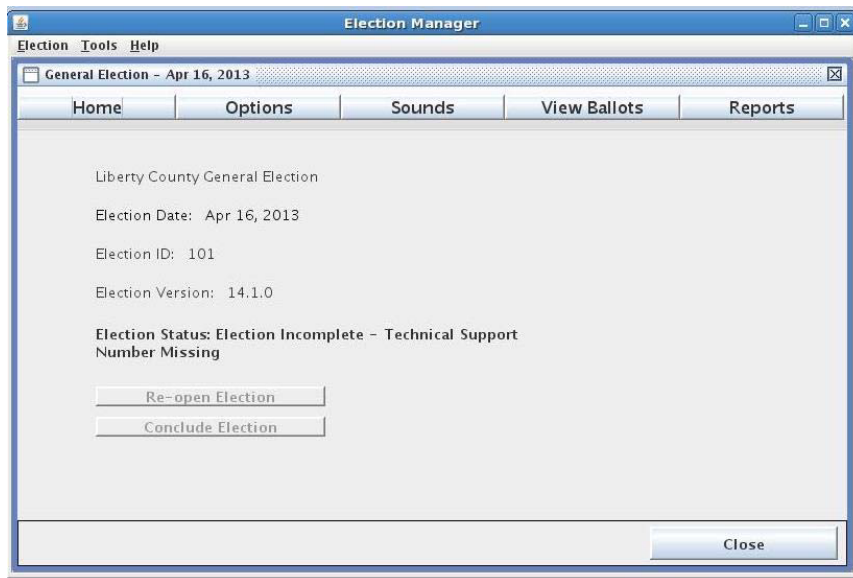
Right-click an Election desktop icon and select **Open**



2. While the Election is being opened the following screen will appear.



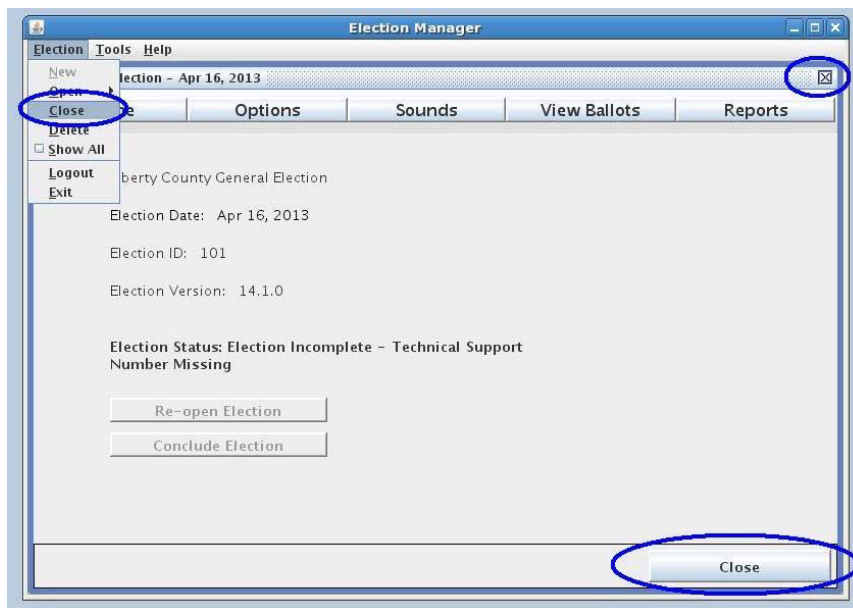
3. Once the election is open, the Election Home Window (presented below) is displayed.



2.4 Close Election

To close an open Election:

- Open the **Election** menu and select **Close**, or



- Click the close box (X) in the upper right corner of the Election window, or.
- Click the Close Button at the bottom right of the window.

2.5 Delete Election

Deleting an election removes all data; all sound files and ends the election versioning. Only a **Superuser** may delete an election, and only when the election is concluded or is being completely cancelled.

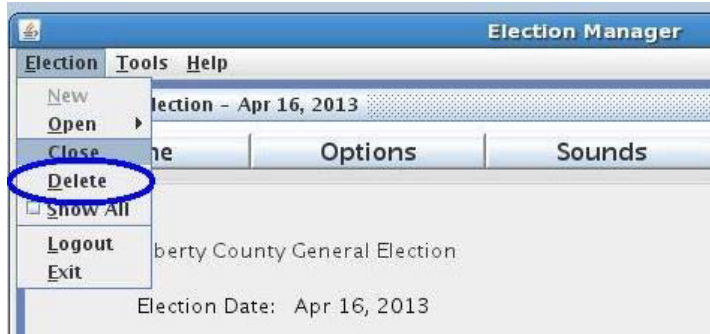
If you need to correct an election (such as adding a contest or changing a candidate's position) simply correct the data in the Ballot Layout Manager and reload the Election File as described in [Create an Election](#). In this case all data will then be updated.

A Superuser may delete an Election in two cases:

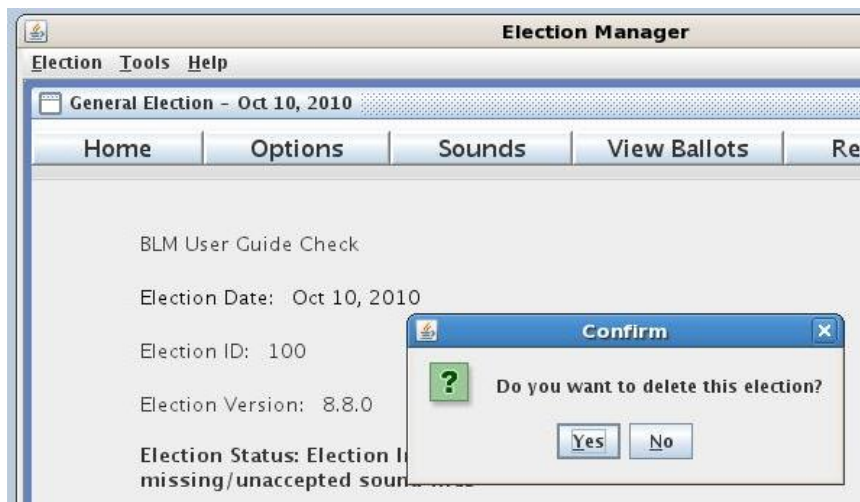
- The Election Day is 22 months in the past and is set to “Concluded.”
- The election has not yet been exported to a CD image.

To delete an election via Election Menu:

1. With the election open (the election must be open) click the Election menu and select Delete.

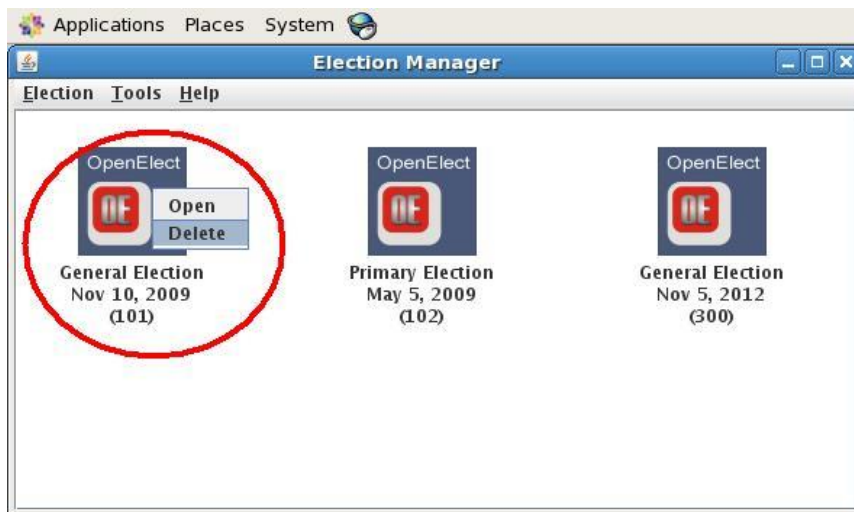


2. Respond to the confirmation message.

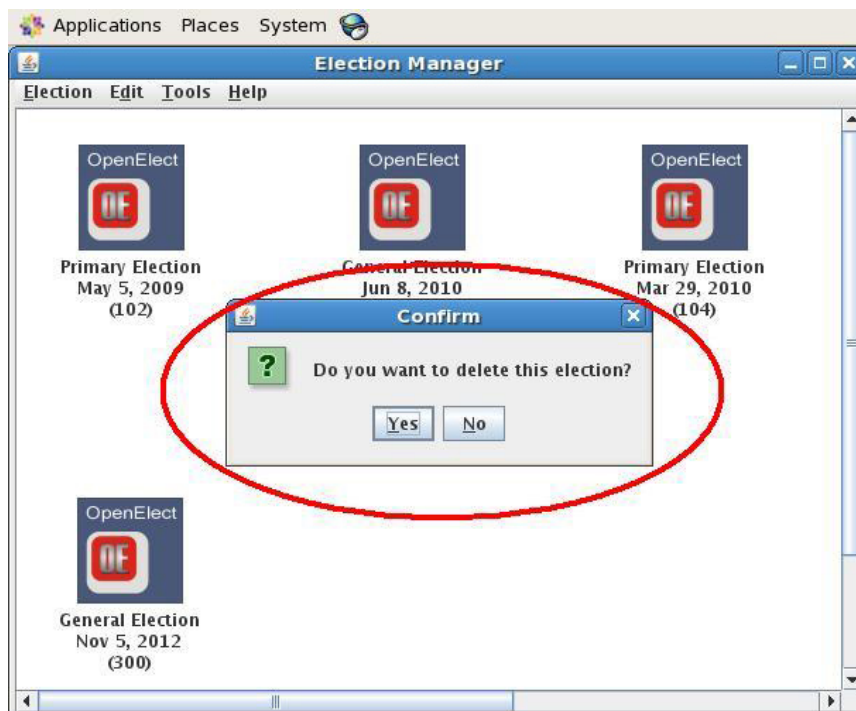


To delete an election via ICON:

1. Without an election open, click on the Election icon of the election that is to be deleted.
Then click on Delete (as indicated in the diagram below).



2. Respond to the confirmation message.



2.6 Show All Elections

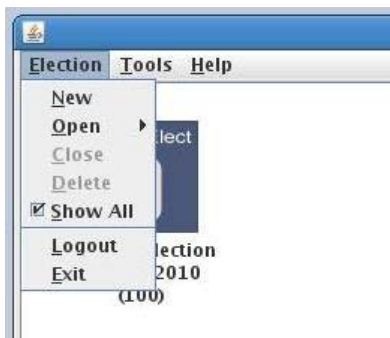
When an election has been concluded, it is no longer visible on the Election Manager desktop. A Superuser can view all elections, current and concluded, by turning on the Show All option.

To show concluded elections:

1. Open the **Election** menu.



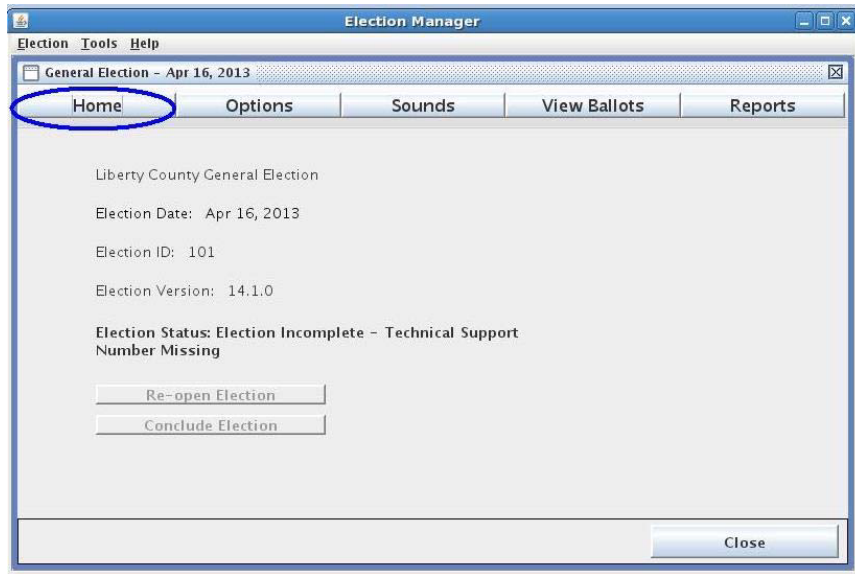
2. Click to check the **Show All** checkbox on the menu.



Click **Show All** again to clear the box and hide the concluded Elections.

2.7 Election Home Window

When you double-click (or right-click/open) an election (as described in Section 2.3), the election Home screen appears first, showing the election name and version. You can access the Home window whenever an election is open by clicking the **Home** button on the top toolbar.



The Home window includes:

- Election title, Election Date, Election ID, and [Election Version](#).

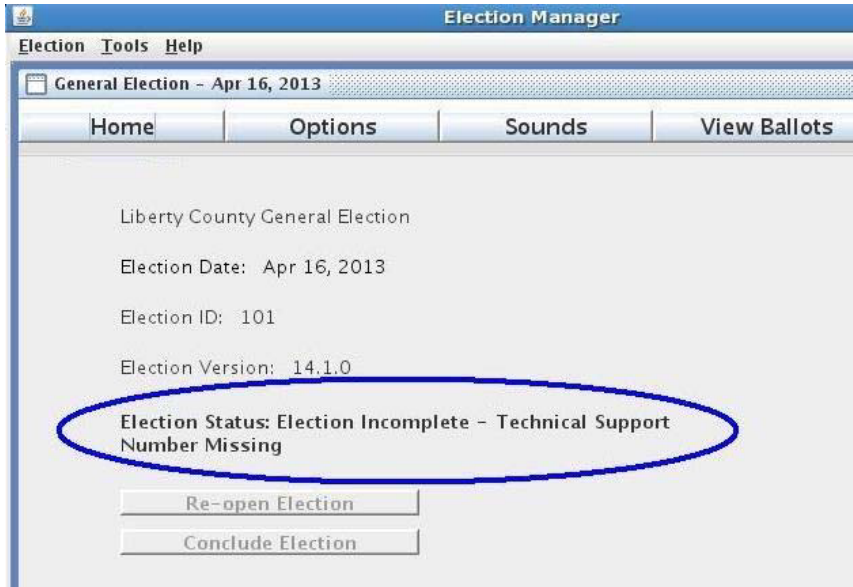
Note: if the Election Date is in the past, the Election Date will appear in RED.



- Election [status](#) (Refer to section 2.8)
- **Re-open Election** button.
Available only to Superusers, this large button at the bottom of the screen becomes active when an election has been exported to a CD image and allows it to be re-opened so that it can be changed and re-exported.
- **Conclude Election** button.
Available only to Superusers, this large button at the bottom of the screen becomes active when an election has been exported to a CD image and after the Election Date (not before or on the Election Date). It allows the Superuser to completely close the election to changes. Use this button after Election Day to lock down the final election.

2.8 Election Status

Election status is displayed on the Home window. An election progresses through several “states” as you prepare to create the Election CD. The Election status helps determines actions you need to take to complete an Election.



The statuses that can be displayed are:

- **Election Incomplete**
The currently open election cannot be exported to a CD image; the election is missing a key component:
 - required sound files,
 - there are no Maintenance nor Supervisor users defined, or
 - there is no technical support number defined.During this state, make any changes to settings or options.
- **Election Complete**
The election is automatically set to “Complete” when Maintenance and Supervisor users have been defined, all required sound files are in place, and the technical support number is defined. You can still make changes to settings, and you can also export to a CD image (and then write that to a CD) whenever you are ready.

If necessary data is removed from a "Complete" Election, the Election returns to this “Election Incomplete” state.

- **Election Exported**

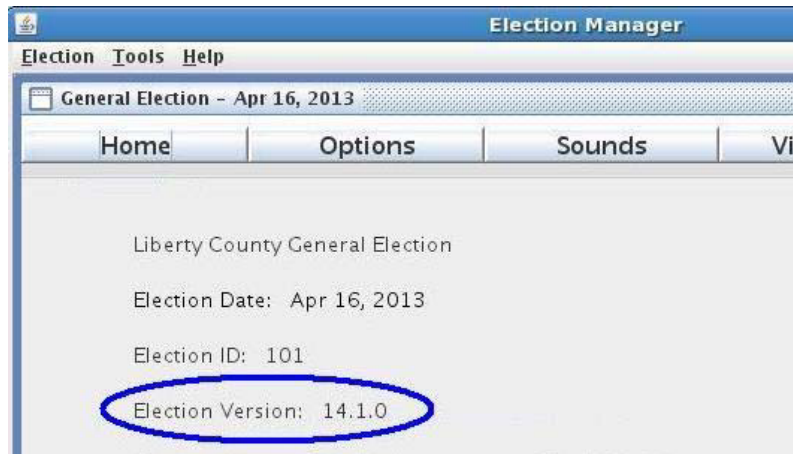
The election has been exported to a CD image. If you need to make any changes to the Election, a supervisor can press the **Re-Open** button to return the election to the “Complete” state. After making changes, you export the election again to ensure your changes are applied to the official Election CD image.

- **Election Concluded**

The election is finished and the Election ICON on the EM desktop is now hidden from Admin users. The Election ICON can only be seen by a supervisor with the **Show All** option enabled. Once an Election is **Concluded**, no further changes can be made. The Superuser uses the [Conclude Election](#) button to set the election to this state after Election Day.

2.9 Election Version

The Election Version is displayed on the Home window.



When the Election File loads successfully, the Election Manager assigns a version number to the election. If you need to re-load the same election due to changes or errors, any options you have set using the Election Manager are kept, and just the XML data is updated.

Version numbers have three values: X.Y.Z.

- X reflects the loaded or reloaded Election XML
- Y reflects any changes to the Election Manager options
- Z reflects any loaded or reloaded sound files

The first version of an Election is 1.1.0 indicating this is the first time the Election XML has been loaded, default options have been applied, and election-specific sound files have not been loaded yet.

"Election Version 1.3.2" would indicate that the Election XML has been loaded once, options have been applied and saved three times (including the first time), and sound files have been completely loaded once and then reload.

2.10 Election Buttons

When you open an Election, the following buttons are provided at the top of the screen:



Home

Click to view the Election Home window. See [Election Home Window](#) Section 2.7.

Options

Click to select Election Options, Printing Options, and Audio Options. See [Election Options](#) Section 3.1.

Sounds

Click to upload Election sounds. See Election Sounds Section 4.

View Ballots

Click to view ballot styles for each precinct, in each language used in the Election. See [View Ballots](#) Section 5.

Reports

Click to create and preview reports such as the audio script, ballot proof and a list of election system users, Section 7.

Undervote Check

This button appears on the screen only *if you select* the Undervote Checking option “Check Selected Contests” on the Election Options window and Save that change. Click this button to select the contests where you want to check for undervotes at the polls. See [Undervote Checking](#) Section 6.



3 Options

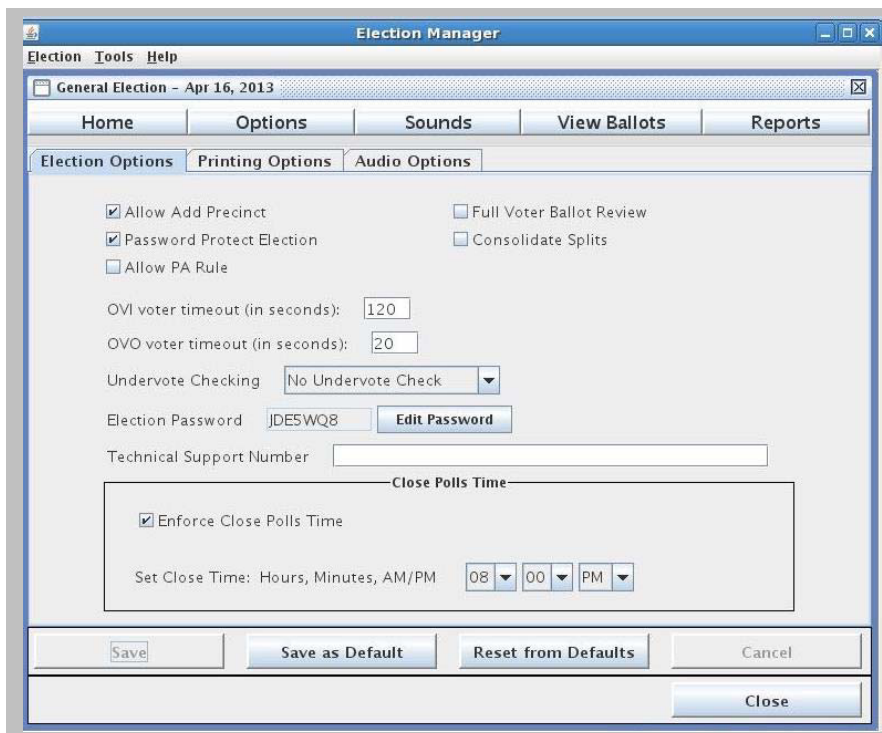
3.1 Election Options

Election Options affect general OVO and OVI settings for this election. Select **Options** at the top of the Election Manager window and click the **Election Options** tab.

Options Button



Election Options



To set Election Options:

1. Change the fields as wanted on the Elections Options panel. See below for explanation.

[Allow Add Precinct](#)
[Password Protect Election](#)
[Allow PA Rule](#)
[Full Voter Ballot Review](#)
[Consolidate Splits](#)
[OVI Voter Timeout](#)
[OVO Voter Timeout](#)
[Undervote Checking](#)
[Election Password](#)
[Technical Support Number](#)
[Enforce Close Polls / Close Time](#)

2. Click **Save** at the bottom of the panel to save these settings. Click **Save as Default** to apply the settings as new defaults for subsequent elections.

You will be prompted to save changes when you attempt to leave the Election Options window.

Allow Add Precinct

If this checkbox is marked, poll officials will be able to insert an additional ballot header card into the OVO and add a precinct at any time after voting is open. Normally, the OVO is initialized for precinct voting at startup at the polls, when ballot header cards for the precincts voting are inserted. This option allows poll officials to initialize the OVO for any registered, out-of-precinct voter who wishes to cast a ballot.

If “Allow Add Precinct” is left blank (set to FALSE), only those precincts initialized on startup will be considered valid.

Password Protect Election

If this checkbox is marked, the password in the Election Password field (on the same panel) will be required:

- to open voting on Election Day at both the OVO and OVI,
- to add a new precinct to the OVO after voting has already started on Election Day,
- to close voting at the OVO if a CLOSE Ballot is inserted (if the Admin Menu is used, the election password is required for entry to the menu and is not prompted again at the closure request), and
- to start a special voting session on a non-Election Day.

A randomly generated password is provided in the Election Password field. This system generated password can be changed by the user (See below).

If the checkbox is cleared, no password is required to open and close voting. The password will still be required to:

- add a new precinct
- start Voting Mode sessions (early voting, absentee, provisional, and recount)
- start each individual voter session on the OVI

Allow PA Rule

The **Allow PA Rule** applies to the OVI only. When **Allow PA Rule** is checked and the voter has already selected the maximum number of selections allowed for the contest, if the voter selects another candidate all other selections will be automatically deselected and the new selection will be honored.

Full Voter Ballot Review

When this checkbox is marked, the OVO will display all ballot selections made on the screen.

Consolidate Splits

When this checkbox is marked, votes recorded from split precincts will be consolidated under their parent precinct at the OVO. This means that there will be only one Election Summary report for the split precinct(s) and its parent; the summary will include all contests required by each precinct. There will be no record of how a single, split precinct voted on a more general district office, such as the Presidential contest.

If “Consolidate Splits” is blank (set to FALSE), a separate count of split precinct votes will be maintained at the OVO. The OVO will provide separate Election Summaries (tally reports) for each split precinct.

OVI Voter Timeout

The OVI Timeout value (120 to 600 seconds) is used by the OVI unit as an inactivity timeout setting. If the OVI voter, during a session, does not interact with the OVI device (via a touch on the screen, a keypad button depression, or a Sip&Puff input) the session will be canceled and the OVI will return to the Election Password Entry screen used to initiate a new voting session. The OVI does prompt the user if they are still there prior to the inactivity timeout.

OVO Voter Timeout

The OVO Voter Timeout value (20-600 seconds) is used for ‘full review’ handling only. When the voter inserts their ballot and their selections are displayed on the screen, the application will wait for the timeout value, if no screen buttons are pressed on the touch screen, a message is displayed asking the voter if they want to continue. If the voter presses the continue button, the application will return to the voter selection screen and waits for the timeout time again. If no button is pressed, the OVO will wait this timeout value time again with the ‘do you want to continue’ screen being presented. When this time period expires again, the OVO will eject the ballot back to the voter with a inactivity message presented.

For the short review on the OVO, also known as ‘bypass validation’, the voter inserts their ballot, if everything is valid, the ballot is cast automatically. If there are errors, the ballot is ejected back to the voter. The only timeout in short review is when the voter pressed the ‘bypass validation’ checkbox, they have 10 seconds to insert their ballot or the checkbox is cleared.

Undervote Checking

The OVO validates ballots by checking for overvotes (more candidates than allowed are selected for the contest) and duplicate votes (only in the case of an RCV election). It will also validate ballots by checking contests for undervotes (fewer candidates than the maximum allowed are selected), if instructed. When Undervote Checking is "on," the OVO prints a Ballot Alert for the voter if it detects an undervoted contest. Undervotes are also counted by contest in the Tabulator's Election Summary reports.

Choose one of the following from the drop-down list:

- **No Undervote Check:** The OVO will ignore undervotes.
- **Check All Contests:** The OVO will check for undervotes in all contests on the ballot.
- **Check Selected Contests:** The OVO will check for undervotes only in the contests selected in “Undervote Checking.”

The **Undervote Checking** button is deactivated at the top of the window unless you select this option. This option lets you limit undervote checking to high-profile contests.

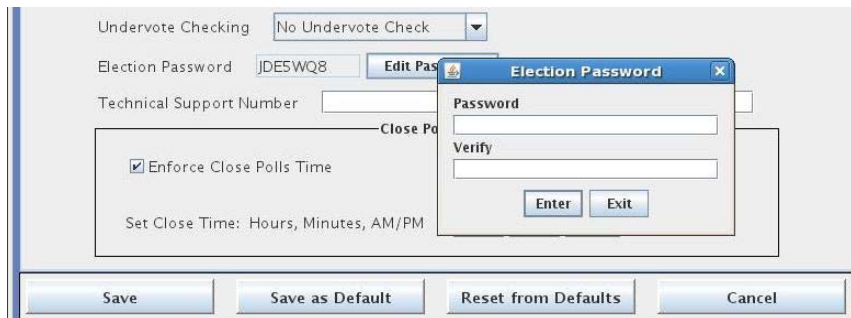


If Full Voter Ballot Review is checked, the under vote checking open is disabled and the EM uses the “Check all Contests” option as the default for undervote checking.

Election Password

When “Password Protect Election” ([described above](#)) is checked, the Election Password field defines the password to the election. The OVO and OVI Operator enter the password to open voting on the system. This password is required to open non-Election Day Voting Modes, as well as, each individual OVI voting session.

A randomly generated password is provided in the Election Password field. You can click the **Edit Password** button and replace the generated password by enter any password that is 7 characters in length and a combination of letters and numbers (at least one number and one letter, no spaces).



You will be asked to enter the password twice to verify. Upon successfully changing the password, the following screen will be displayed.



A Training Election password (used only to start the machine if required and add precincts when the Public Count > 0) is "demo123".

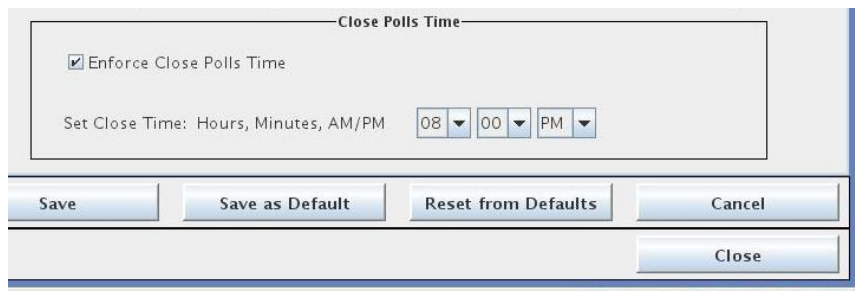
Technical Support Number

This is the telephone number that will appear on the OVO and OVI screen when an error or system failure occurs. Select the text in this field and type over it to enter the number you wish operators to call on Election Day for assistance (up to 30 characters).

Note: This is one of the key items that need to be set to allow the election to be exported by the EM application.

Enforce Close Polls Time / Set Close Time

Check the Enforce Close Polls Time option to force the OVO and OVI to stay open for voting until the specified time for closing voting at the polls Election Day.



The Close Time you select is enforced based on the OVO's and OVI's internal system clock, which is updated by the Election Server when a new Election is loaded.

Set your Close Time by clicking the drop-down arrows and selecting the hour, minute, and AM or PM of the closing time (the Unisyn default is 8:00 PM).

Clear the Enforce Close Polls Time option to allow the operator to close voting on the OVO at any time. If the option is cleared, the Close Time setting is ignored.

3.2 Printing Options

Three printed receipts are available from the OVO: (1) Ballot Alert reports, (2) Voter Cast Ballot Receipts, and (3) the Election Summary (or tally report). To set options for these reports, select **Options** at the top of the Election Manager window and click the **Printing Options** tab.

Printing Options

The screenshot shows the 'Election Manager' window with the 'Printing Options' tab selected. The window title is 'General Election - Apr 16, 2013'. The 'Printing Options' tab is active, showing several settings: 'Auto Print Alerts' is checked, 'Auto Print Voter Receipts' is unchecked, and 'Display Contest Results on Summary' is unchecked. The 'Ballot Type' is set to 'FULL' in a dropdown menu. The 'Number tally reports to print' is set to '1' in a dropdown menu. The 'Enter Alert Report header title' field contains 'Ballot Alert'. The 'Enter text for the signature line' field contains 'Signatures'. At the bottom, there are buttons for 'Save', 'Save as Default', 'Reset from Defaults', 'Cancel', and 'Close'.

To set Printing Option:

1. Fill in or change the fields on the Printing Options panel as needed. See below for explanation.

[Auto Print Alerts](#)
[Auto Print Voter Receipts](#)
[Display Contest Results on Summary](#)
[Ballot Type](#)
[Number of Tally Reports to Print](#)
[Enter Alert Report Header Title](#)
[Enter Text for the Signature Line](#)

2. Click **Save** to save the settings, or **Save as Default** to apply these settings as defaults in the future.

Note: There is no default setting for Ballot Type across all elections. When **Save as Default** button is clicked, no default setting for Ballot type will be saved.

Auto Print Alerts

If this option is checked, a Ballot Alert report automatically prints when the OVO detects overvotes (and/or optionally undervotes) on a voter's full page ballot. VA ballots from the OVI will not produce a Ballot Alert report since the review is performed by the OVI prior to the ballot being submitted to the OVO. For Full Voter ballot review the Ballot Alert report will print if the voter ballot has errors and the "Full Review" option is off.

Auto Print Voter Receipts

If this option is checked, a Voter Receipt prints automatically when the ballot has been accepted at the OVO.

Display Contest Results on Summary

Check this option to display contest results on the Election Summary report that prints when voting is closed on the OVO system. If the option is cleared, the Election Summary will show open/close times and provide blanks for signatures. No results will be shown. If the Election Summary is viewed/printed from the OVO Maintenance menu, it will show the contest results.

Ballot Type

This option affects the OVI only. **Ballot Type** allows the user to define the information format that will be presented on the top of the OVI VA ballot. The system will optionally present three different options:

| | |
|------------|---|
| FULL | (Contest and Candidate Name with position) |
| COMPRESSED | (Contest ID and Candidate Name with position) |
| WRITEIN | (Write-In selections only – Contest ID and voter Write-in data with position) |

The screenshot shows the 'Printing Options' tab in the Election Manager. The 'Auto Print Alerts' checkbox is checked. The 'Ballot Type' dropdown is set to 'FULL', and its menu is open, showing 'FULL', 'COMPRESSED', and 'WRITEIN' as options. The 'Number tally' is set to 1.

The options allowed for the VA ballot presentation is based upon the combination of the number of contests and write-ins defined for the current election. If the system determines that a full and/or compressed presentation will not fit on the OVI ballot for the current election, these options will not be presented to the operator for selection. Only options that can fit on the OVI VA ballot will be presented to the EM application operator.



IMPORTANT

For voter privacy, jurisdictions may want to restrict the information printed at the top of the OVI ballot to Write-In selections only (Contest ID and voter Write-in data with position).

Number tally reports to print

Use the drop-down list to select the number of Election Summary reports (1 to 9) you wish to print automatically when voting is closed on the OVO system.

Enter Alert Report Header Title

This header appears at the top of the Ballot Alert receipt, where overvotes, duplicate (RCV only), and/or optionally undervotes are reported. Select and replace the existing header in the text box, "Ballot Alert". Type in the text you would like to appear at the top of the list of the voter's Alert Report, up to 18 characters.

Enter Text for the Signature Line

Select and replace the existing header in the text box, "Signatures," with the text you would like to appear at the bottom of the Election Summary report (up to 50 characters), above the lines where poll officials sign.

3.3 Audio Options

The Audio Options affect how the OVI handles Audio Ballots. Click the **Options** button at the top of the window and select the **Audio Options** tab.



To set audio options:

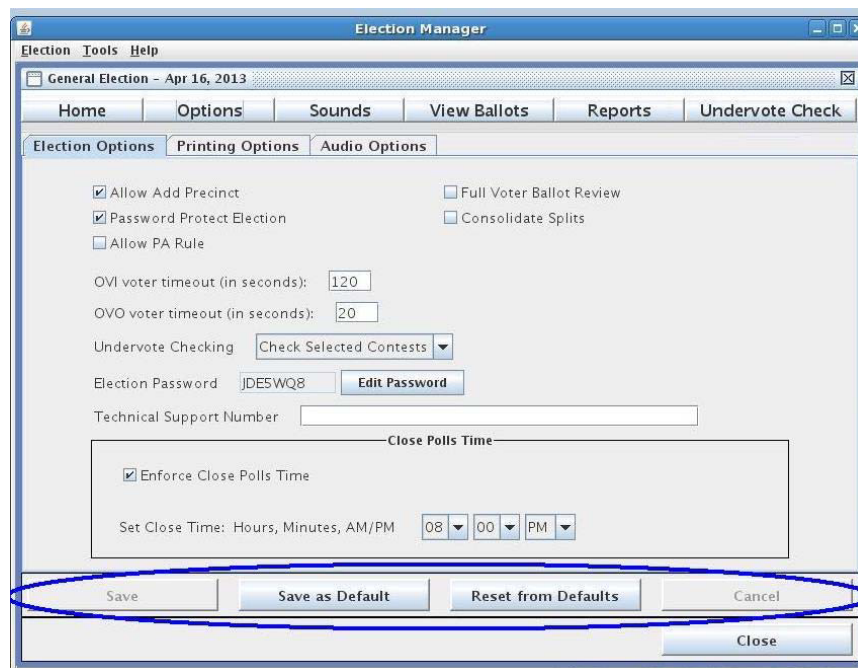
1. Select or clear the option on the Audio Options pane. See below for explanation.
2. Click **Save** to save the settings or **Save as Default** to apply the settings as the new defaults.

Use Separate Party Sound for Candidate

If this option is checked, the candidate script won't contain candidate party information. If this setting is not checked, the candidate scripts will contain the candidate party information if candidate party information is available.

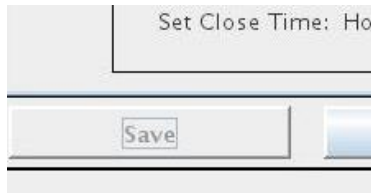
3.4 Saving Your Changes

The buttons at the bottom of the Election Manager window allow you to save or cancel your changes. The Election Manager requires that you save options you've changed. If you make changes and attempt to leave a window, you are prompted to save your changes.

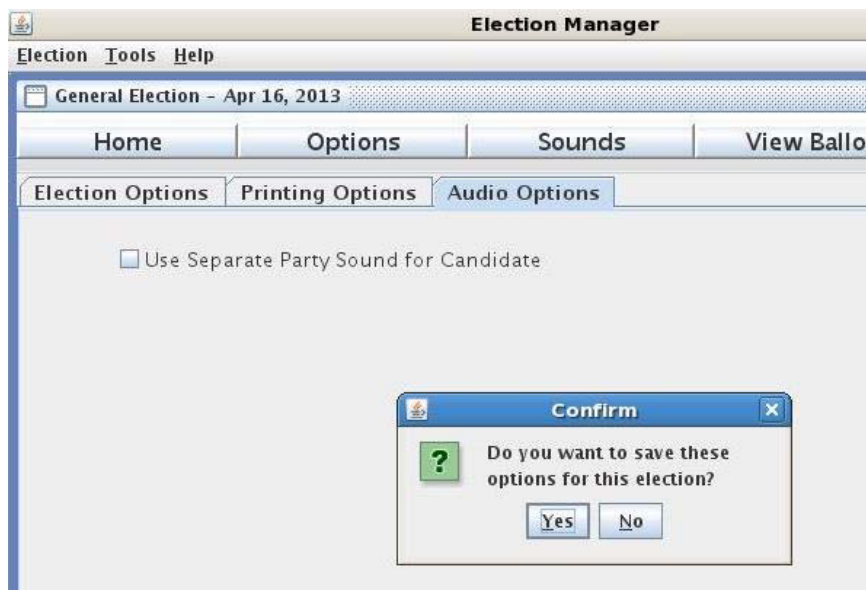


Save

Click **Save** to apply changes and store the changes in the Election Manager database. The Save button is inactive when first entering the Options area. Once a value changes, the button becomes active (see two examples below)

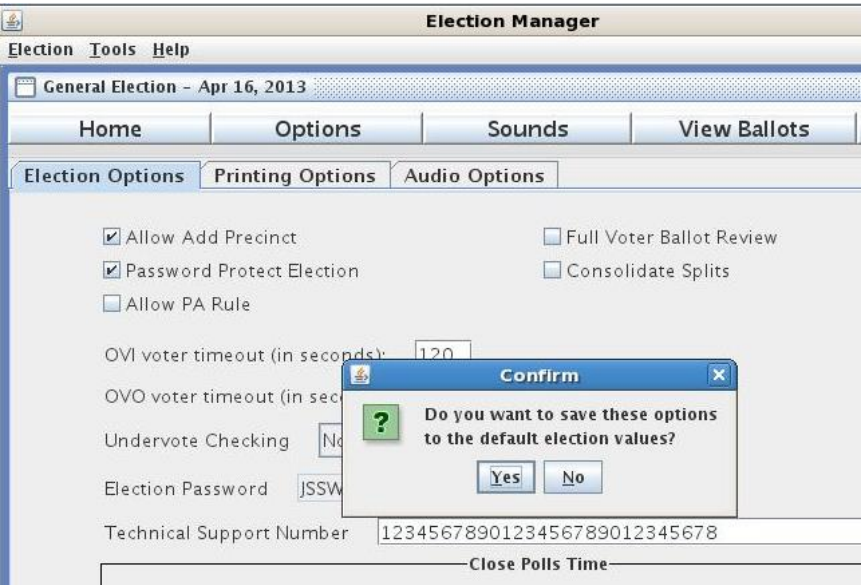


When you click SAVE, the system will ask you to confirm the SAVE request.



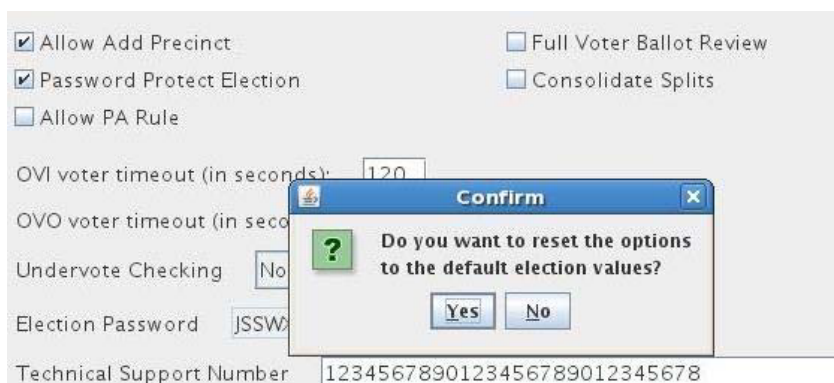
Save as Default

Click **Save as Default** to apply your changes and to make the current settings the default for future elections. Once you click Save as Default, the system will ask you to confirm the SAVE request.



Reset from Defaults

Click **Reset from Defaults** to cancel your changes and return to the default settings. Once you click Reset from Defaults, the system will ask you to confirm the Reset request.



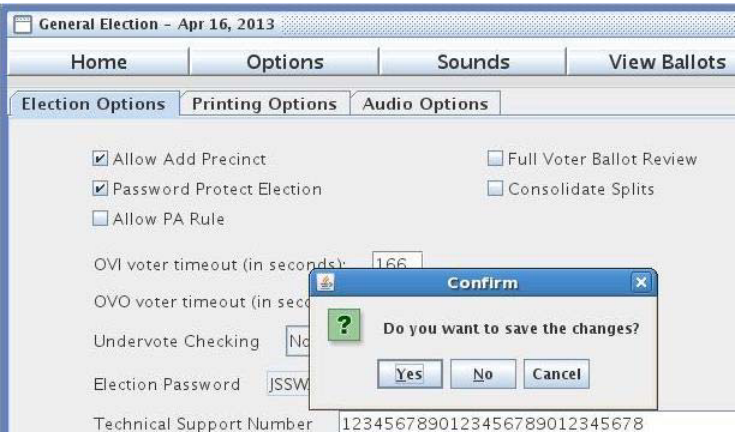
Cancel

Click **Cancel** to cancel all changes made since the last "saved" changes. The system will confirm the Cancel request with the prompt below. If accepted, the system will reload the last save election options.



Close

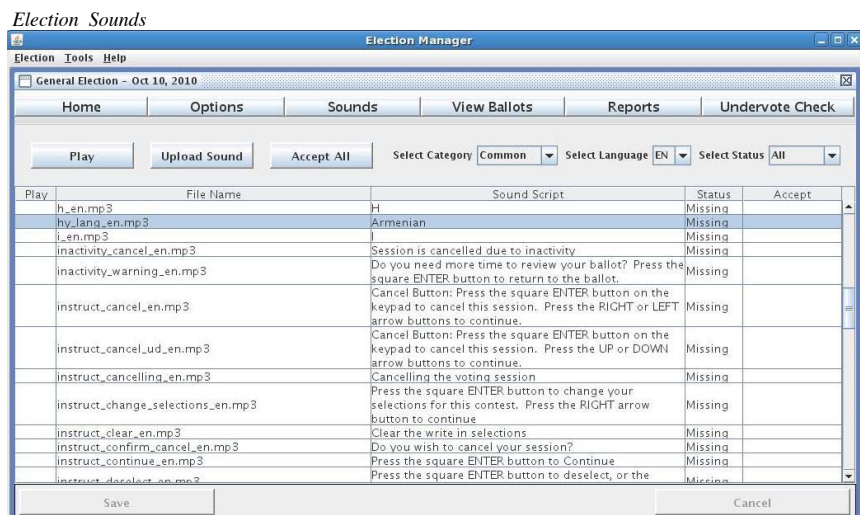
Closes the election window and returns you to the Election Manager desktop. If changes have not been saved, you will be prompted if you want to save the changes (Yes or No) or Cancel the Close Release.



4 Election Sounds

4.1 Sound Production Overview

An audio script that is created by the Election Manager provides all of the sound elements required for the audio component of the OVI. The **Sounds** window for an election lists each file name and the script content required in the file.



In the above illustration, the contest file has not been uploaded (status is "Missing").

The required sound files for exporting include:

- All common sound files in English,
- All candidate sound files in English,
- All party sound files in English,
- Election sound file (election_introduction_en.mp3) in English, and
- All contest sound files in English except contest description sound files.

Contest description sound files are optional. Sounds in non-English languages are optional.

To produce the sound files, follow these steps:

1. Print the Audio Script, which will identify all sound files needed by the system, and review the Sound Script wording for all entries. If changes are needed, you can go back to the BLM to make the change or you can edit the non-common category text directly at the EM.
2. Decide whether to use pre-recorded common sounds or electronically generated sounds. You may need to convert these sounds from .WAV to .MP3, depending on your sound files. The OVI utilizes MP3 files.
3. If you choose to record sound files, a recommended method for good results is first create .wav files with the following settings
 - o Bit Rate: 256 kbps
 - o Audio Sample Size: 16 bit
 - o Channels: 1 (mono)
 - o Audio sample rate: 16kHz
 - o Audio Format: PCM

Then convert the .wav files to .mp3 using a sound converter utility (such as Switch Sound File Converter) with the following settings:

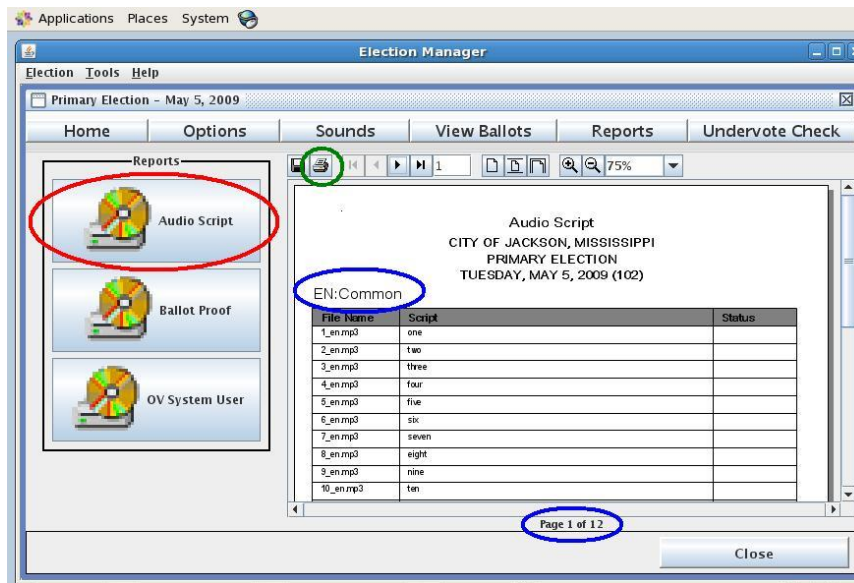
- o Constant Bit Rate (CBR) 128kbps
- o High quality encoding: off
- o Channel Encoding Mode: Mono
- o Include CRC: off

Direct to MP3 recording should be valid if the settings identified above are used for the base recordings. The sound files should be recorded such that their volumes at normal levels are within the Decibel parameters designated by the VVSG (40 to 50 dB SPL).



The recordings should be between 40 and 50 dB SPL (decibel Sound Pressure Level)

4. To help in recording the sounds, print the Audio Script (see Section 7.1). All sound files have the filenames listed on the Audio Script (and on the Sounds window of the Election Manager).

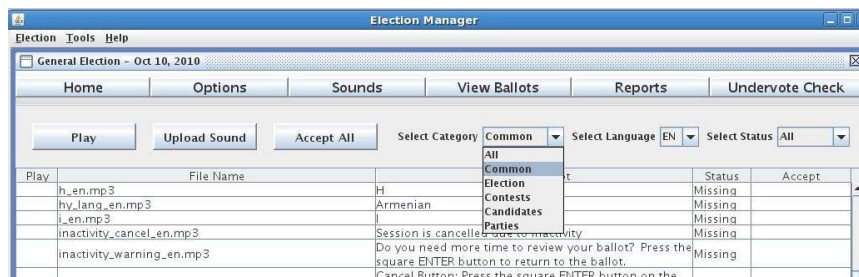


5. Use any standard recording software and a microphone. Have a narrator read a script element as you record the narrator's voice. Record the script element in the file specified by the Audio Script.
6. If more than one language is defined for the election, have a narrator read each translation in a separately recorded file, saving each recording in the file specified by the Audio Script for that language.
7. If the recorded files' format is anything other than MP3, convert all recorded sound files to the MP3 format using any standard sound file conversion program. Give the files the exact filenames specified by the audio script.
8. Place all MP3 sound files on a CD or USB and copy them on to the Election Manager PC.
9. In the Election Manager, click the **Sounds** button at the top of the window to access the Sounds window, and then click the **Upload Sound** button. See [Uploading Sounds](#). You can upload sounds one at a time, all sounds from a folder, or however you choose.
10. Test all sounds before "accepting" them. Be sure to test all sound translations, too.
11. Once the sounds are tested and verified, accept the sounds.

Once all sound files required by the audio script have been uploaded to the Election Manager and marked as "Accepted," you can export the Election to CD. To meet the requirement for being able to create an election, only the English versions of the sound files are required. But it is recommended that all languages be converted.

4.2 Sound Categories

Because an election may include hundreds of sound files, a **Sound Category** drop-down list at the top of the Sounds window allows you to choose which sound files are displayed so the task of producing the sounds for an election is broken up into manageable groups. You can further limit the display by selecting a Sound Status (refer to Section 4.4)



Sound categories are as follows:

- **All.** All categories are displayed.
- **Common.** These are the navigational prompts, letters, and numbers that are used from election to election (e.g., "Vote for" and "One"). All common sound files for the identified language are listed when you select the Common category on the Sounds window.
- **Election.** This sound file (there is only one) presents the election type, title and date. The election information is translated into all required languages. The Election sound file is listed when you select the Election category on the Sounds window.
- **Contest.** These sound files present the contests for office and the measure contests. Contest titles are translated into all required languages at the BLM. All contests, from federal to local districts, are listed when you select this category on the Sounds window. Filenames all begin with "con_".
- **Candidates.** These files present candidate names and descriptions. Descriptions are translated into all required languages by the BLM. All candidates for all contests are listed when you select this category on the Sounds window. Filenames all begin with "can_".
- **Parties.** These sound files present the political parties associated with candidates and Primary elections. Party names are translated at the BLM. The parties for the election are

listed when you select this category on the Sounds window. Filenames all begin with “party_”.

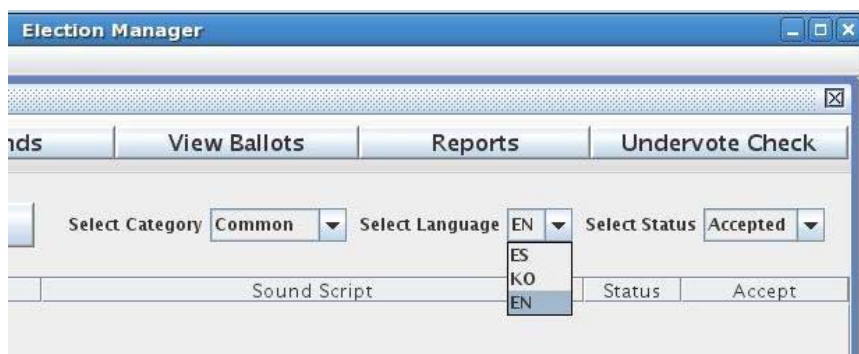
4.3 Sound Language

If more than one language is being used for the election, a translation for each sound is needed in all languages.

The text translations are entered in the Ballot Layout Manager for generations of the ballots as well as support of the OVI ballot presentation. These translations are exported from the BLM in the Election XML and then loaded into the Election Manager database when the election is loaded (New creation/update).

When each language is brought up on the Sound Window, the translated script for that language will appear in the center column.

The different languages are accessed via the **Select Language** drop-down list at the top of the Sounds window. You select and view the collection of sound files for each supported language by clicking the down-arrow to the left of **Select Language** and the supported list of Languages is displayed (up to 10).



A two letter code represents each language. Clicking on the Language that you want to work with will bring the files related to that language.

| | |
|----|-----------|
| CA | Cantonese |
| EN | English |
| ES | Spanish |
| HY | Armenian |
| JA | Japanese |
| KM | Cambodian |
| KO | Korean |
| MA | Mandarin |
| RU | Russian |

| | |
|----|------------|
| TL | Tagalog |
| VI | Vietnamese |
| ZH | Chinese |

You can limit the view of files by selecting Sound Category (refer to Section 4.2) and Sound Status (refer to Section 4.4).

You will note that the language is indicated in the last part of the sound filename. For example:

- The English version of the first contest file: **con_1_en.mp3**
- The Chinese version of the same file: **con_1_zh.mp3**
- The Spanish version of the same file: **con_1_es.mp3**

The same two letter code represents the language that was used in the Ballot Layout Manager user guide.

4.4 Sound Status

The third drop-down list at the top of the Sounds window lets you view all sound files by **Sound Status**.



You can view status for each language and each sound category. The sound files listed on the Election Manager Sounds panel shows sound in the following states:

- **All** – All sounds files and their status are displayed.
- **Missing** - The sound file is missing and needs to be uploaded.
- **Uploaded** - The sound file has been uploaded. You can play the sound (click the **Play** button in the left column) to make sure the file plays properly and its contents match the Sound Script shown in the center column.

- **Accepted** - The sound file has been checked as "accepted" in the far right column. The "Accepted" marker indicates that the file has been listened to, verified and is ready to be exported to Election CD.

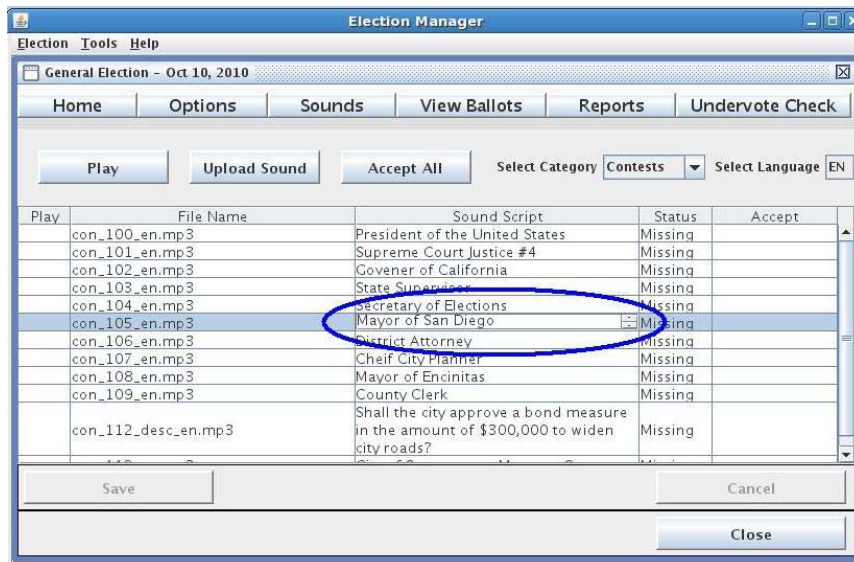
Sounds automatically go from "Missing" to "Uploaded" status when sound files are uploaded. You need to click Accept ALL before it is "Accepted". (Refer to Section 4.8.) This means that you have listened to the file play and verified that the correct sound is in the correct place.

4.5 Editing Sound Script Text

The Sound Script data in the tables is directly editable by the user. The reason for this is to allow the sound scripts to be adjusted to phonetically better represent the information being presented if a text to Sound generator is being used. This script information is not used for the ballots (generated at the BLM) or the information presented on the OVI screen as part of the election presentation. This text is used only in producing the sounds and it should be changed for phonetic reasons only (not changing the text presented audible from what is presented visually on the OVI screen).

To edit Sound Scripts:

1. Select Sounds.
2. Locate the Sound Script that is to be changed (Language specific).
3. Click the Sound Script to edit under the column Sound Script. In the example below, the field for "Mayor of San Diego" is selected (file con_105_en.mp3).



4. Correct the Script in the appropriate language.
5. When editing is completed, click SAVE.

Note: changes made in this manner will not be reflected in the Ballot Layout database or Ballots that have been generated. If the change needs to be made to information on the ballots, the change should be made with the Ballot Layout Manager application, exported, and then imported into the EM election file.

4.6 Uploading Sounds

All files on the Sounds window with the status “Missing” need to be uploaded. Click the **Sounds** button at the top of the window to view the Sound filenames, script, and upload status.

Files are in MP3 format. If sounds have been recorded in another format, use any standard sound editing software to convert the files to MP3.

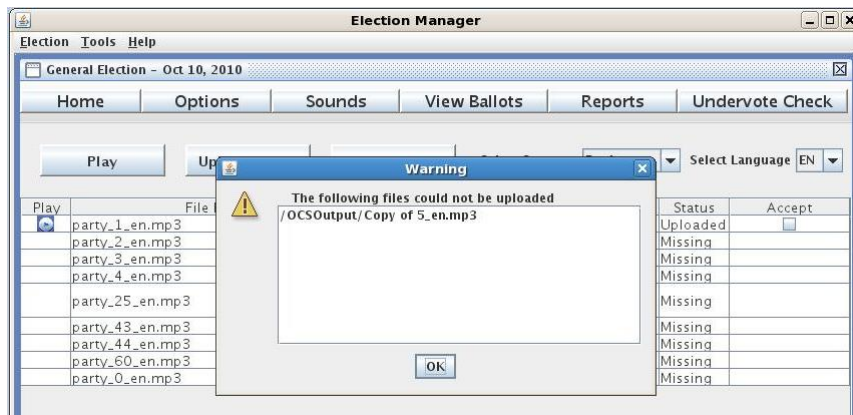
To upload sounds:

1. As described in Section 4.1, produce the MP3 records and copy them to the Election manager PC.
2. Click the **Upload Sound** button.

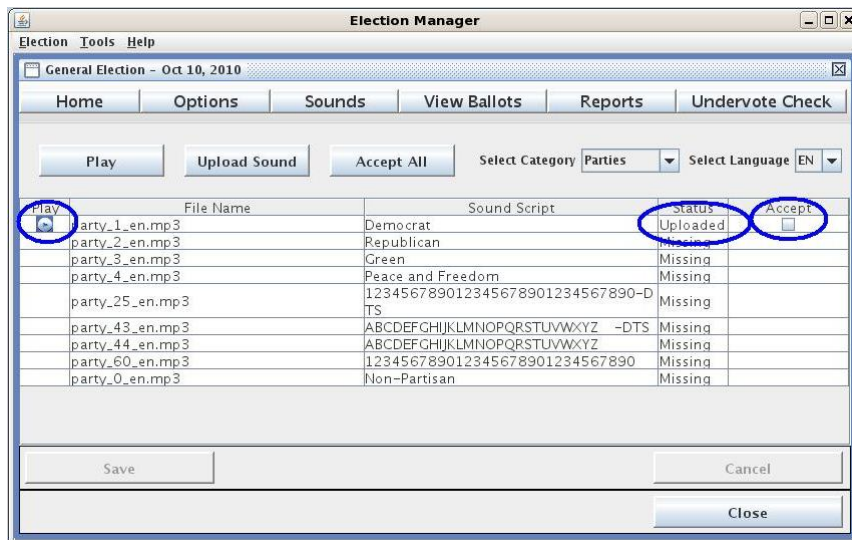


3. Navigate to the folder with the recorded MP3 sounds you produced in step 1.
4. Select one or more files (hold down the Ctrl key and click on the files you want), or select an entire folder of files (highlight a folder). Click **Open**.

- A dialog box lists filenames that you attempted to upload that are not required by the audio script. Make note of any files that may have incorrectly spelled filenames before pressing **OK** on this dialog box.



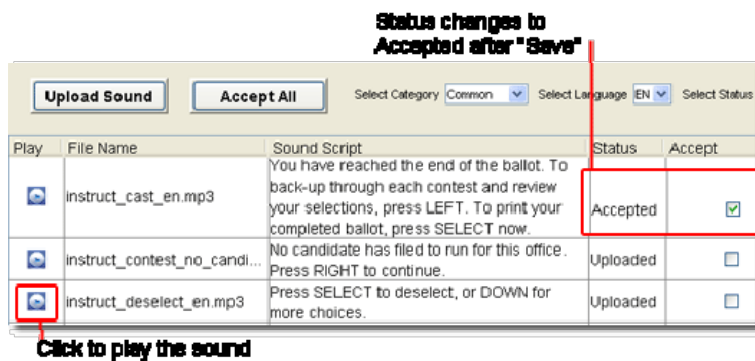
- The sound status changes to "Uploaded" on the Sounds window for all uploaded files. You can now test and "Accept" the files.



If you get an error on uploading the sound files, write down the text in the error message box and compare the file names that came up in the error message to the script displayed in the Election Manager.

4.7 Testing and Accepting Sounds

Test all sounds before “accepting” them. Be sure to test all sound translations, too. Sounds should be clear, understandable, and accurate.

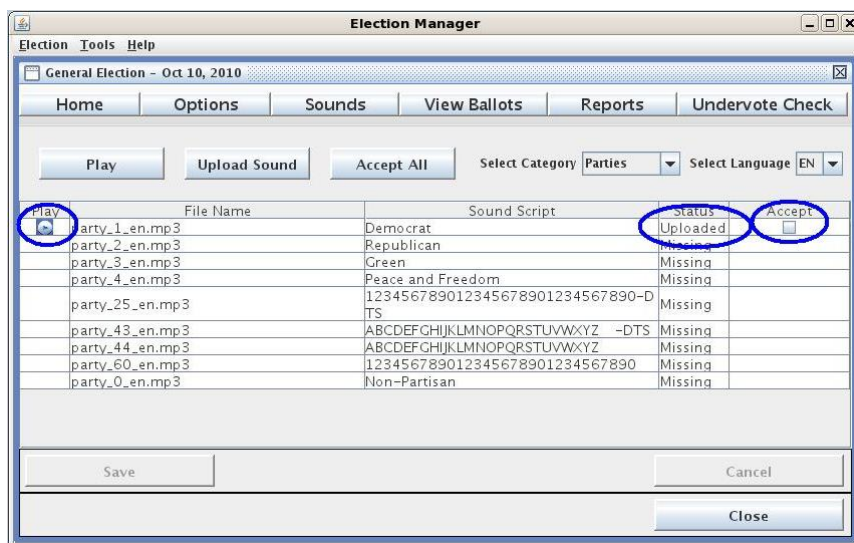


To test the sounds:

1. Use the Category, Language, and/or Status to shorten the list of sounds, if you wish.
2. Click the **Play** button in the left column, next to an uploaded sound file or the **Play** button in the top portion of the screen. The file plays. Make sure the file plays properly and its contents match the Sound Script shown in the center column. If the file cannot be found, the following message will be displayed



- Click the **Accept** box to the right of the sound if the sound plays correctly and according to the script.



- Click **Save** at the bottom of the window to save your changes. The Status for the sound files (where you checked the **Accept** box) changes to "Accepted."

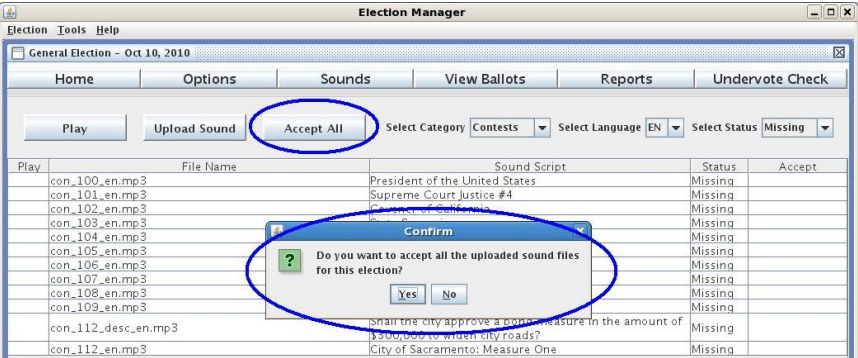
4.8 Accept All Sounds

The Election Manager provides an **Accept All** button that allows you to accept sounds as a group.

To accept all uploaded sounds:

- Select **Sounds** to open the Sounds window.
- Click **Accept All**.

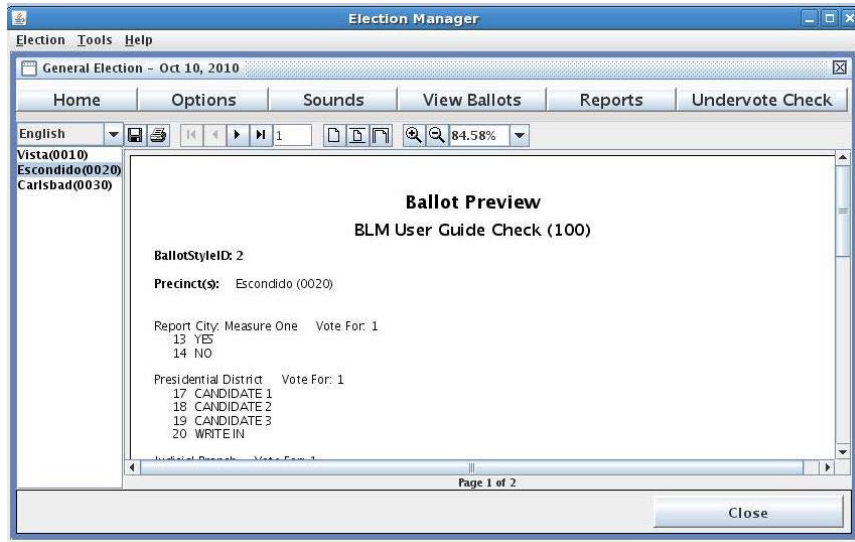
- 3. A message asks you to confirm whether you want to accept all the uploaded sound files for this Election. When you click **Yes**, all sounds with the status of “Uploaded” are changed to "Accepted" in the database.



5 View ballots

5.1 View Ballots

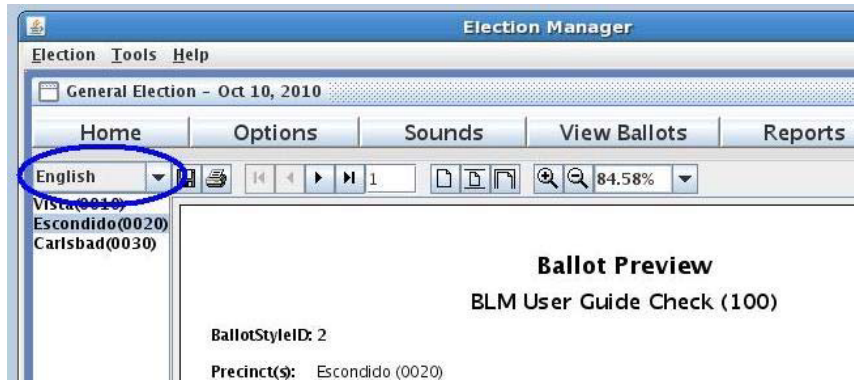
You can view ballots by precinct as they appear in the sample ballot. Each ballot displays the contests and candidates for a selected ballot style.



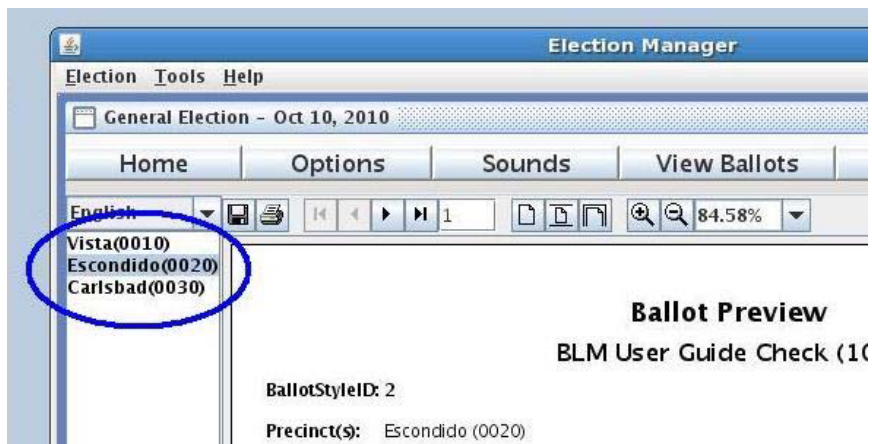
To view the election ballots:

1. Click the **View Ballots** button at the top of the Election Window. All precincts and split precincts are listed in the left column of the View Ballots window.

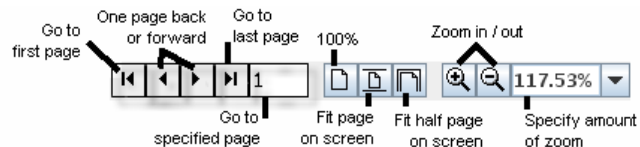
- If more than one language is used, select the language you wish to view from the drop-down list above the precincts at the left of the View Ballots window.



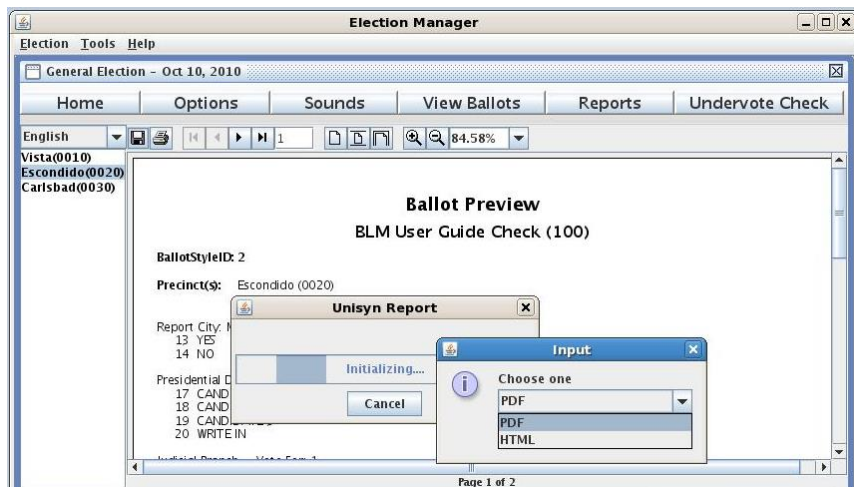
- Click a precinct on the left side of the window to display the ballot style for that precinct. Scroll to view the entire ballot.



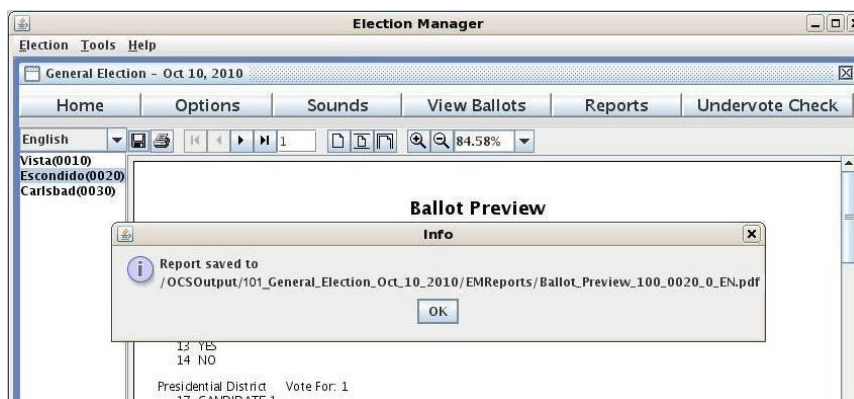
- Use the toolbar above the right ballot pane to page through the ballot and zoom in or out.



5. To save the ballot to a .pdf or HTML, select the Save icon. The system will ask for format to save the information in. Select PDF or HTML.



The ballot is saved to /OCSOutput/<election file>/EMReport/Ballot_Preview_<election id>_<precinct id>_<party id>_<language id>.pdf



Election file directory name is in the format

‘<election id>_General_Election_mmm_dd_yyyy’ for general elections and

‘<election id>_Primary_Election_mmm_dd_yyyy’ for primary elections.

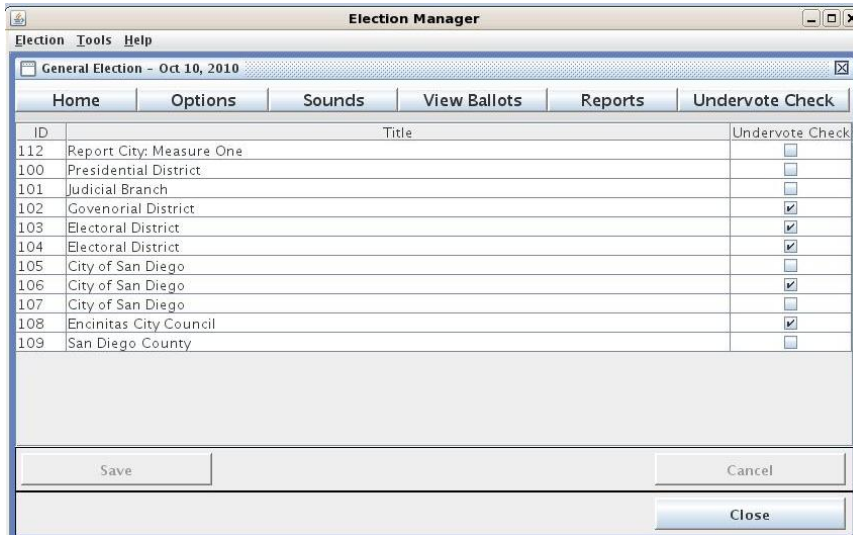
Note: You may only view ballots from this window. If changes are necessary, return to the Ballot Layout Manager, make the changes, and prepare a new Election XML file.

6 Undervote Check

Undervote Check is available on the top button bar *only* if under [Election Options](#) you chose **Check Selected Contests** for the Undervote option. Use the Undervote Check panel to choose the contests you want the OVO to check for undervotes during Election Day voting. When you click the **Undervote Check** button, a list of all contests on the ballot appears.

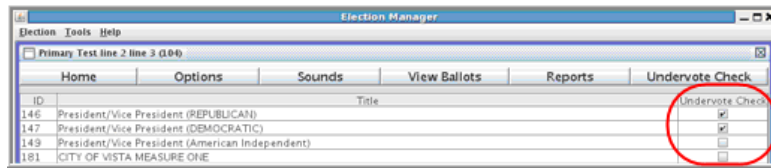


Election Undervote Check



To select contests for undervote checking:

1. Next to each contest you would like the OVO to check, click to mark the **Undervote Check** box in the right column.
Click again to remove the checkmark.



Only marked contests will be checked by the OVO for undervotes.

2. Click **Save**.

7 Reports



IMPORTANT

Final reports from the BLM and EM should be retained to prove accuracy of election contents and definition.

7.1 Audio Script

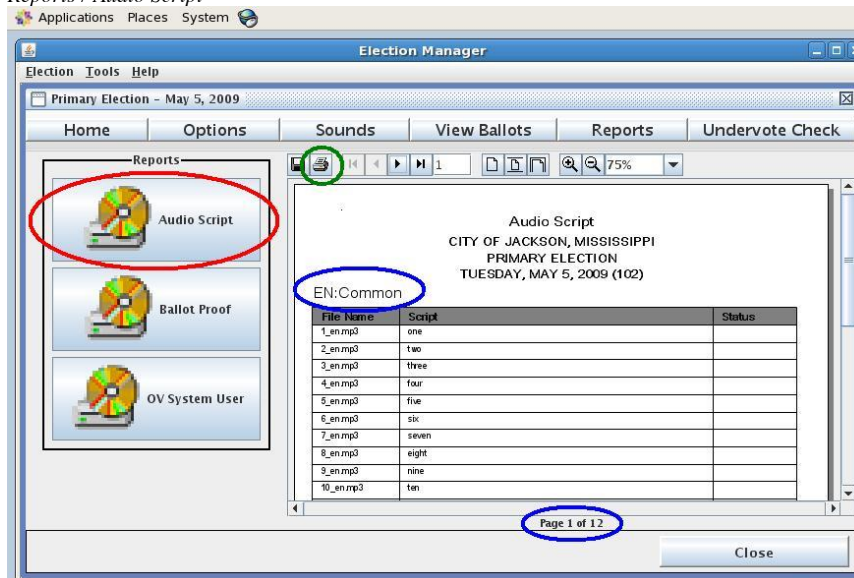
The audio script provides a written narrative of the election and the MP3 sound file names for all files required for the Audio Script component of the OVI. Sound files include election title, and all contests and candidates in all languages.

Be sure to complete all necessary translations for the ballot before generating a script for non-English audio production.

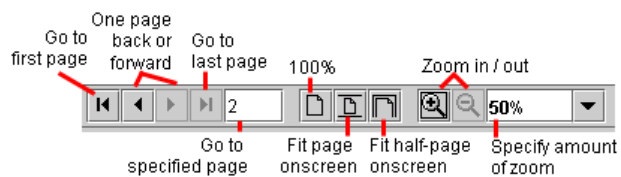
To create the audio script:


1. Click **Reports** on the toolbar, or open the **Election** menu and select **Reports**.
2. Click **Audio Script** to view and print a script for the election.

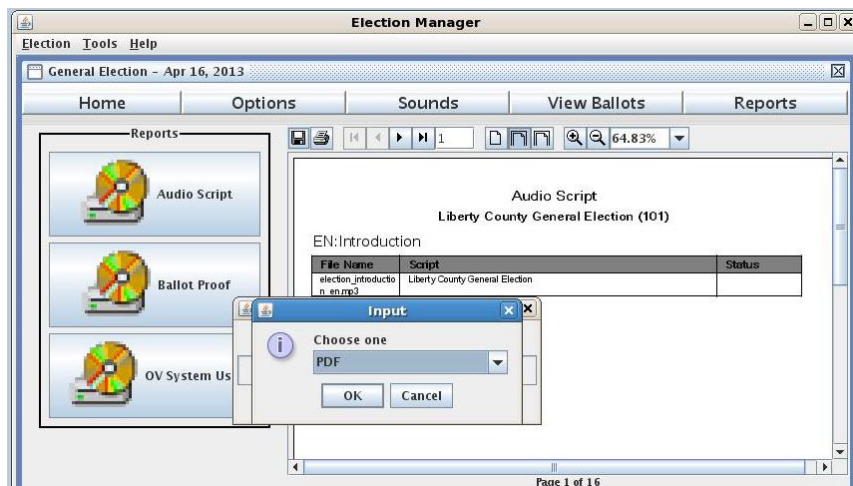
Reports / Audio Script



- View the report on screen using the paging and zoom controls. The report displays the election introduction as the first page, and you can page forward to candidates, contests, parties, and translations.



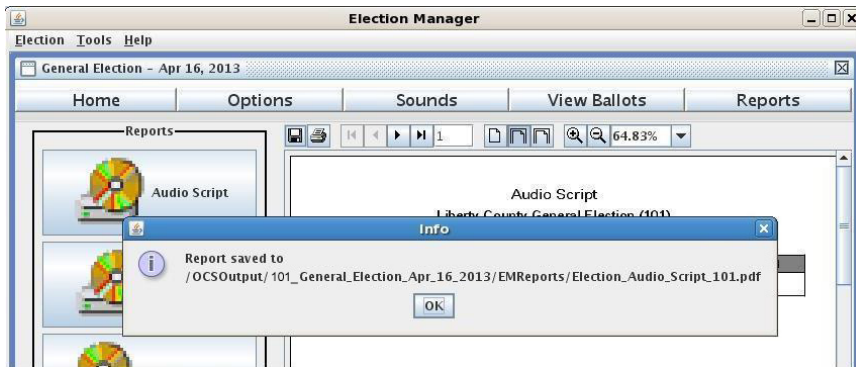
- Save the report by clicking  on the toolbar.
- The system will ask for format to save the information in. Select PDF or HTML.




6. The report is saved to the election folder under the OCS Output folder, for example:

/OCSOutput/<election id>_General_Election
_mmm_dd_yyyy/EMReports/Election_Audio_Report_<election id>.pdf

For primary election, the destination is /OCSOutput/<election id>_Primary_Election_...



7. Print the Audio Script by clicking  on the toolbar. A Print dialog box opens allows you select a printer, and select pages and copies to print. Click **OK** to print the report.

The Election Manager provides the audio script to help you produce your election-specific sound files. You can use any standard sound recording software, or you can use an option text-to-speech generator. All sound file names are exactly as specified by the Audio Script report, and are converted to MP3 format before uploading to the Election Manager. See [Sound Production Overview](#).

7.2 Ballot Proof Report

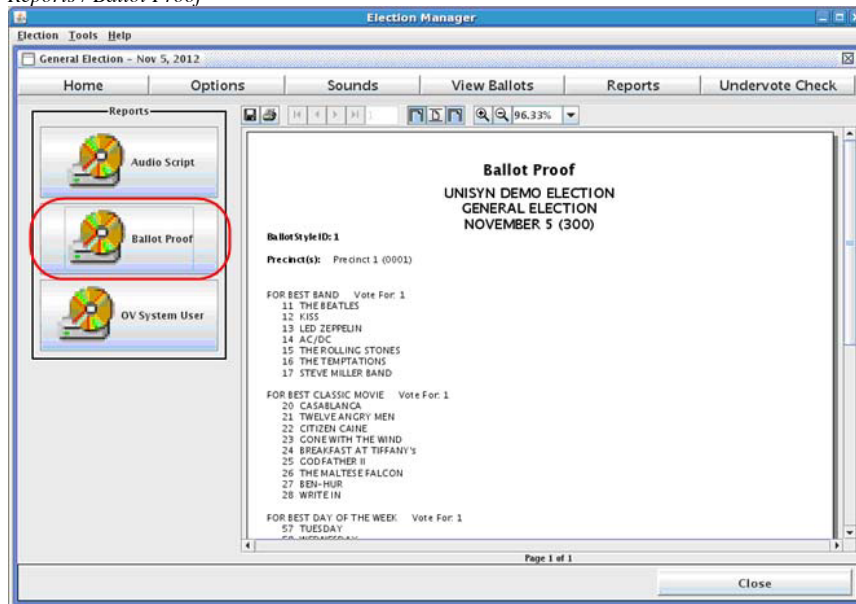
The Ballot Proof report shows one ballot style at a time, listing the ballot style ID, precincts that will be using the ballot style and each contest on that ballot. This report allows you to proof each ballot style generated for the election to make sure it is accurate:

- Check the precincts associated with each ballot style.
- Check contests and candidates for each ballot style..

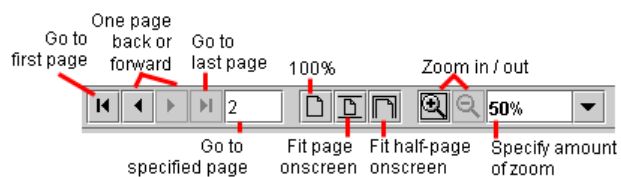
To create a Ballot Proof report:


1. Click **Reports** on the toolbar.
2. Click **Ballot Proof** to generate a script of the contests, candidates and measures defined for the election.

Reports / Ballot Proof




3. View the report on screen using the paging and zoom controls.



4. Save the report by clicking  on the toolbar. The report is saved to the election folder under the OCS Output folder, for example:

/OCSOutput/<election id>_General_Election_mmm_dd_yyyy/EMReports
/Ballot_Proof_Report_<election id>.pdf

For primary election, the destination is /OCSOutput/<election id>_Primary_Election_...

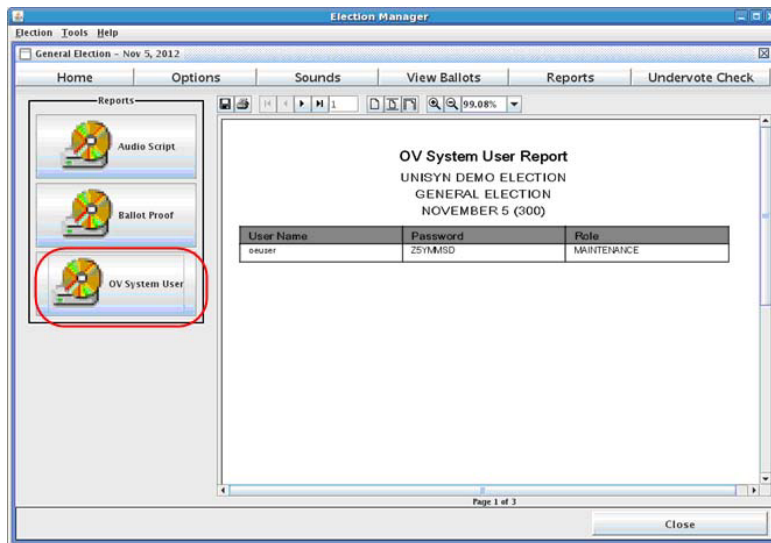
5. Print the Ballot Proof by clicking  on the toolbar. A Print dialog box opens allows you select a printer, and select pages and copies to print. Click **OK** to print the report.

7.3 OV System User Report

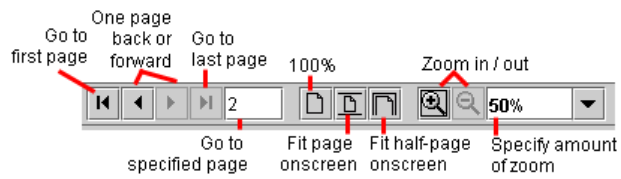
The OV System User Report displays the list of maintenance and supervisor users and their passwords that are produced for an election. The users and passwords are created in the User Management section of Election Manager.


To create a OVO System User Report:

1. Click **Reports** on the toolbar.
2. Click **OV System User** to produce a report that lists the maintenance and supervisor users and their password for the election.




3. View the report on screen using the paging and zoom controls. The report shows the User Name in the first column, the Password in the second column, and the Role in the last column.



4. Save the report by clicking  on the toolbar. The report is saved to the election folder under the OCS Output folder, for example:

/OCSOutput/<election
id>_General_Election_mmm_dd_yyyy/EMReports/OVOUsersReport.pdf

For primary election, the destination is /OCSOutput/<election id>_Primary_Election_...

5. Print the OV System User report by clicking  on the toolbar. A Print dialog box opens allows you select a printer, and select pages and copies to print. Click **OK** to print the report.

8 Export Election to CD

8.1 Exporting a Training Election

A Training Election is useful for training election and poll officials in OVS voting procedures. A Training Election can consist of fictional contests and candidates and has no connection to any "real" election.

- All Training Election files are internally marked as "Training"
- When the Training Election is loaded on a OVO, the bottom of the OVO Election screen displays "Training"
- Training voting files are deleted on the OVO
- Training voting files can only be accepted by a Tabulator Client "Training Session"

Note: To perform a Logic Test for an Election, export the "real" election. The election can be set to Logic Test from the OVO interface before it is run.

Requirements for exporting a Training Election are the same as for exporting an election:

- Tech Support number is set
- At least one Maintenance user is defined
- At least one Supervisor user is defined
- All required sound files are uploaded and accepted

To export a Training Election:

1. Open the election.
2. Open the **Tools** menu and select **Export Training Election**.
If the above requirements are not yet met, **Export Training Election** will be inactive on the **Tools** menu.

The election data is processed into [files](#) that can be used by the Tabulator, TC, ES, OVO, OVI and OVCS. The files are placed in a "TRAINING CD Image" folder within a folder that takes the name of the election:

/OCSOutput/<election id>_General_Election_mmm_dd_yyyy/TRAINING_CD_Image

3. Copy the files in the **TRAINING CD Image** folder to CD-ROM using the CD-burning software included with the Linux installation on your PC system.



4. Label the Election CD as a Training Election.

After being exported, the Training Election progresses to the "Exported" state.

8.2 Exporting an Election

When the following requirements are met, the open election is eligible for exporting:

- Tech Support number is set
- At least one Maintenance user is defined
- At least one Supervisor user is defined
- All required sound files are uploaded and accepted

The election can then be output to an Election CD and installed on OVO and OVI systems via the ES and used by the Tabulator, TC, and OVCS.

Only a Superuser can export the election.

To export the election:

1. Open the election. Write down the Election ID and version shown on the Home Window.
2. Open the **Tools** menu and select **Export**.
If the above requirements are not yet met, **Export** will be inactive on the **Tools** menu.
3. The election data is processed into [files](#) that can be used by other OVS components. The files are placed in a "CD Image" folder within a folder that takes the name of the election:

/OCSOutput/<election id>_General Election Nov_12_2007/CD Image
Open the **Tools** menu and select **Export**

4. Copy the files in the election's **CD Image** to CD-ROM using the CD-burning software included with the Linux installation on your PC system.



5. Label the Election CD with the election title, ID, and version.

After being exported, the election progresses to the "Exported" state. You can make no more changes to the election from the Election Manager until a Superuser Re-opens the election. See **Re-open Election** in [Election Home Window](#).

8.3 Export Election Files

When you export an Election, the Election Manager writes the following files to a directory. You will copy the entire directory to CD Media.

- **election.enc**
- **Election.zip**
Jurisdiction and ballot data for the Election.
- **Sounds.zip**
Sound files for the audio ballot (used by the OVI only).
- **TOC**

9 User Management

There are two major types of users managed in Election Manager Application, Election Manager Users and OpenElect Voting System (OVS) Users. The OVS users are those who have rights to access certain functionality on Unisyn OVS systems in the field, as well as being able to use the Tabulator Client, OVCS, and Election Server applications. Election Manager Users can only use the Election Manager application.

The Election Manager users have the rights to change data and user information in the Election Manager application. If an Election Manager User also needs access to the other applications, they will need to create a separate user account for that application.

9.1 Election Manager Users

The Election Manager supports two types of users to perform the functions within the Election Manager application (Supervisor and Admin) with different levels of access:

| Superuser | Admin User |
|---|---|
| Login to the Election Manager | Login to the Election Manager |
| Load a new Election | Load a new Election |
| Set any options | Set any options |
| View ballots | View ballots |
| Upload and accept sound files | Upload and accept sound files |
| Upload and clean Transport Media (TMs) | Upload and clean Transport Media (TMs) |
| View machine logs | View machine logs |
| Manage Supervisor and Maintenance user accounts | Manage Supervisor and Maintenance user accounts |
| Backup the Open Election | Backup the Open Election |
| Restore and Delete an Election | |
| Export an election | |
| Manage Admin and Superuser accounts | |
| Deactivate and Activate user accounts | |
| Mark an Election as concluded | |
| Re-open an Election | |

9.2 Election Maintenance and Supervisor (OVS) Users

The Election manager application manages the usernames and passwords for the maintenance and supervisor users that can operate the other applications (ES, OVI, OVO, OVCS, and Tabulator Client).

| Maintenance | Supervisor |
|---|---|
| Login to and use the Election Server | Login to and use the Election Server |
| Login to and use the OVCS | Login to and use the OVCS |
| Login to and use the Tabulator Client | Login to and use the Tabulator Client |
| Can run diagnostics, load an election (if not Election Day), print reports, and start a special voting session. | Can run diagnostics, load an election (if not Election Day), print reports, and start a special voting session. |
| | Can force the start of a voting session and force a close of a session. |

Election user passwords are 7 digit alphanumeric numbers that are dynamically generated and unique for each election, and are not repeatable or changeable. These users and password combinations are only useful for that election.

9.3 UNI User

There is a special account: UNISPCL. The UNISPCL user is only used to perform a special read test (shoeshine Mode) which is allowed only with a Training Election. The UNISPCL user name and password will only be put into the exported file of the election, if the election is being exported as a Training election. There is only one UNISPCL user allowed.

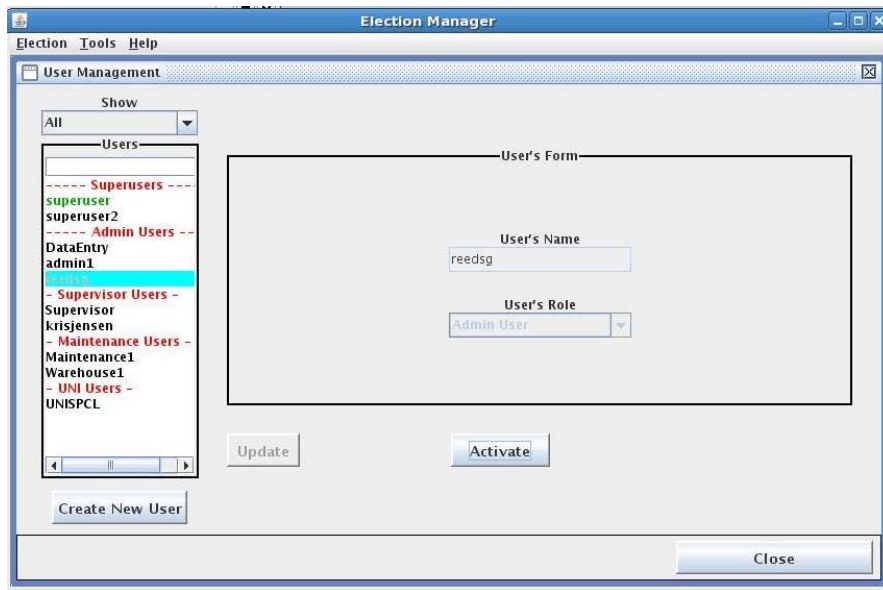
This account cannot be deleted; however, the interface can change the password.

9.4 Creating a New User

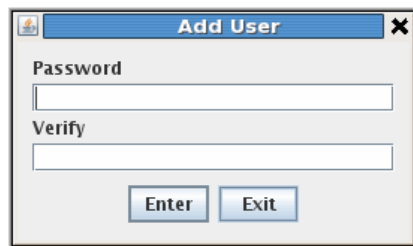
Follow these steps to add a user.

1. Open the **Tools** menu and select **User Management**.
2. Click **Create New User**. The button is at the bottom of the Users list. The User form at right clears.

3. Type a User Name.
Superuser and Admin User names are from 6 to 15 characters, using no spaces.



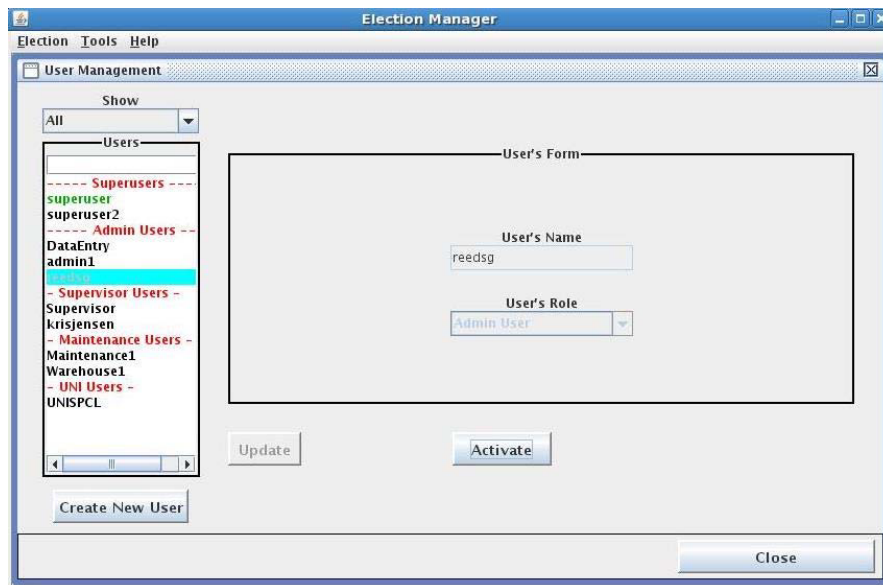
4. Select the User's Role: [Superuser](#), Admin User, Supervisor, or Maintenance User. Only a Superuser can create a new Superuser or Admin account.
5. Click **Add**. If the user role is Superuser or Admin User, the Add User password box appears. For Supervisor or Maintenance users, a 7 digit password is automatically generated when existing election is exported, or when new election is imported.



6. Type a password; 7 to 15 characters Containing at least one letter and one number, and using no spaces. Verify the password by typing it again, and then click **Enter**.

The Supervisor and Maintenance User passwords are generated for each election. To see these passwords, when an election is open, select the Reports button and select the 'OV System User' report.

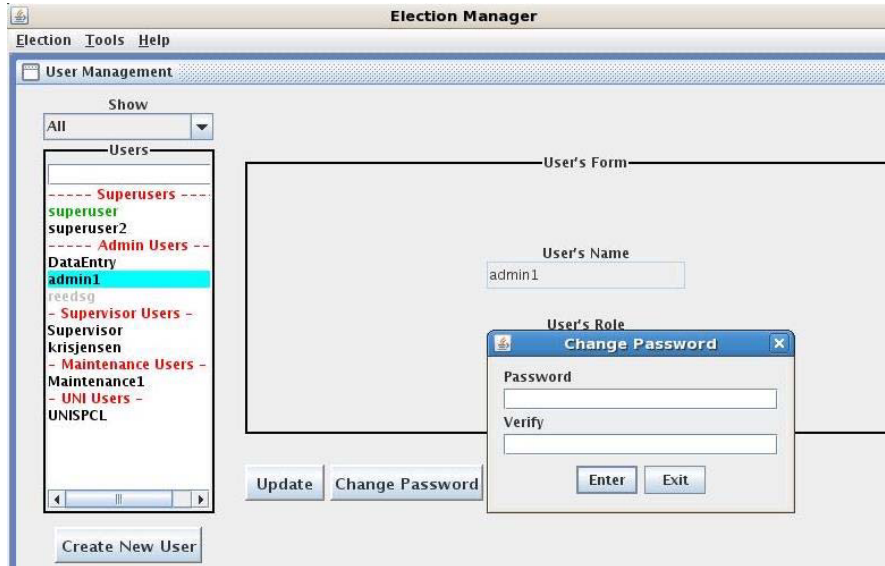
The user is added to the left-column list of Users under the role defined for the user. If the role was not already displayed, it will be added to the list at the time of the first user being defined for that role.



9.5 Changing Passwords

To change any user's password:

1. Open the **Tools** menu and select **User Management**.
2. Select the user from the Users list (for Superuser, Admin user and UNI Users).
3. Click the **Change Password** button. A Change Password box appears.



4. Type the new password in the Password field and again in the Verify field, and then click **Enter**.

9.6 Deactivate / Activate a User Account

Personnel may change before a new election. The Election Manager allows a Superuser to deactivate users who should no longer have access to the Election Manager or, as a Maintenance Technician, to the OVCS, OVO or OVI.

To deactivate a user:

1. Click on the user account name in the left column or start typing the user's name in the box at the top of the Users list. When selected, the user's name and role are displayed.

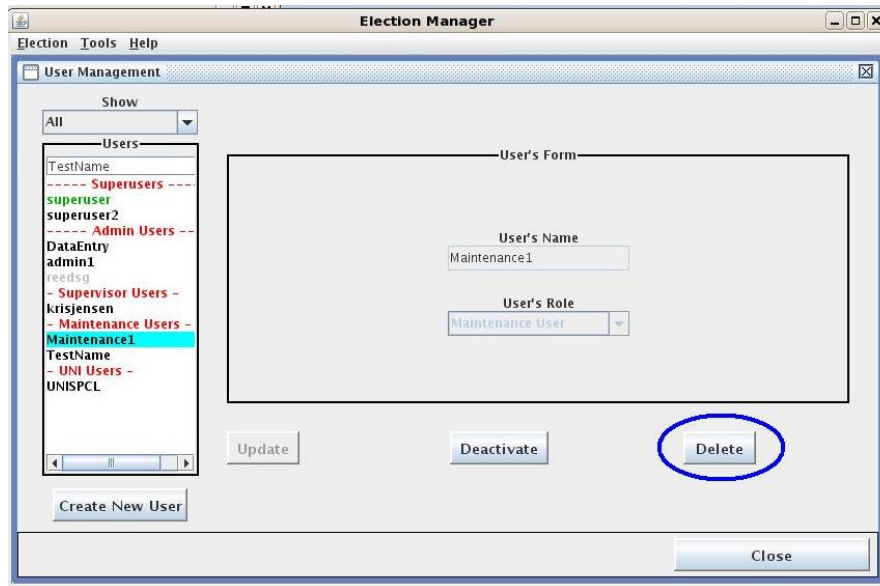
2. Click **Deactivate**. The name in the left-hand list becomes gray, and the user no longer has access.

To reactivate a user:

1. Select the gray, deactivated user account from the left Users list.
2. Click the **Activate** button that appears when you select the account.

9.7 Delete User

When a user is eligible for deletion, the Delete button will appear on the screen.



If there is no other active Supervisor or active Maintenance user, the user will not be eligible to be deleted.

1. Select the user to delete in the left windowpane.
2. Click Delete.

10 TM Upload and Cleaning

The TM Maintenance function can be accessed from the Tools menu at any time and opens the TM window. The window has two pages, one for uploading the TMs and another for cleaning the files off of the TM.

When the TM Maintenance window is open, the application automatically begins scanning the PC for inserted USB storage drives. When a new drive is detected either the upload or cleaning process begins, depending on selected tab.

10.1 TM Maintenance

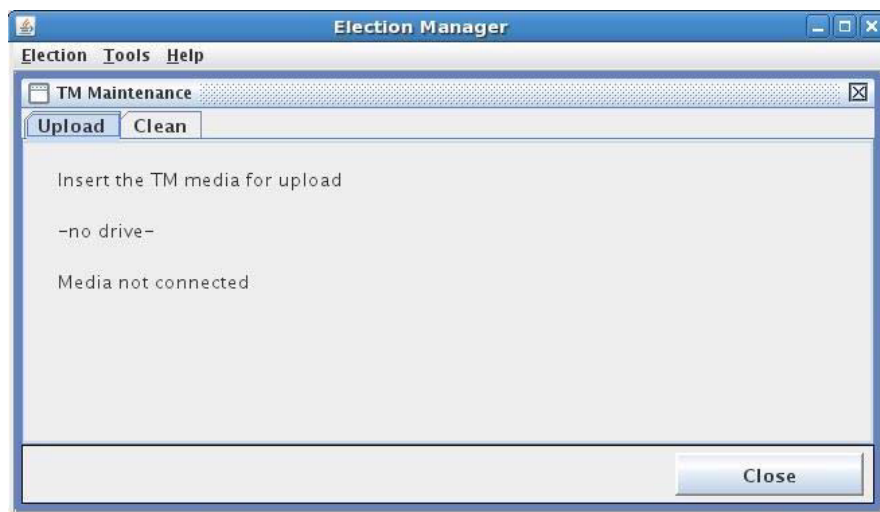
As soon as you open the **Tools** menu and select **TM Maintenance**, the Election Manager looks for a TM (Transport Media from an OVO) inserted in the USB drive. The Election Manager detects whether vote files and machine logs have been uploaded already, and lets you know what to do.

Transport Media (TMs) are USB storage devices used in the OVO to store and transport voting data. They are also used by the OVI to store Admin Logs. This section describes the TM maintenance provided by the Election Manager.

TMs proceed through an Election as follows:

- Unisyn provides all TMs.
- An OVO and OVI require a TM inserted in its PC component USB port and when a new Election is loaded onto an OVD the TM inserted needs to be blank before the download is allowed.
- TMs are one of three storage devices in the OVO and OVI that collect data during voting.
- When polls are closed on Election Night, poll officials remove TMs from the OVOs and deliver them to Election Headquarters. The OVI TM is removed at the Warehouse by Maintenance Technicians.
- At Election Headquarters, the OVO TMs are inserted into Unisyn Tabulator Client, where the voting data is uploaded for tabulation.
- At a convenient time following the Election, all TMs used during the election are inserted into the Election Manager, which detects, uploads and stores OVO and OVI Administrative Log files (also known as “machine logs” since they audit all activity on a particular OVO or OVI machine). You can view these logs using the Machine Logs window of the Election Manager.

- When voting data and machine logs have been uploaded, the TMs can be "cleaned" of all voting data so that they can be used in another Election.



10.2 TM Machine Log Upload

To upload OVO Machine Logs:

1. In the Election Manager, open the **Tools** menu and select **TM Maintenance** to upload OVO/OVI Machine Logs (also referred to as Admin Logs).
2. Insert a valid TM into the USB port of the PC.
3. The Administrative Log is automatically uploaded

If the machine logs have already been uploaded, a message tells you that the TM is ready for cleaning.

When the admin log files are uploaded into the EM from a TM they are put in the folder 'Voting\AdminLog\Election_XXX\Machine_UNIyyyyyy'. The 'XXX' is the Election ID and the 'yyyyyy' is the OVO/OVI/OVCS machine ID (IP).

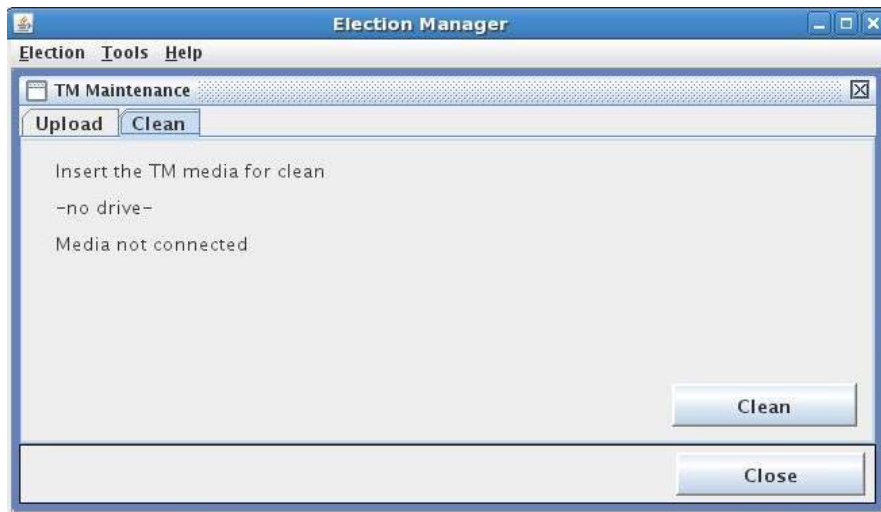
The admin log files are stored in clear text so it can be read by any editor program.

10.3 TM Cleaning

You can clean all files off a TM after the machine log has been uploaded. The clean process removes files from the previous election. It simply removes all vote files and logs.

To clean a TM:

1. In the Election Manager, open the **Tools** menu and select **TM Maintenance panel**.
2. On the Maintenance panel, click the **Clean** tab.



3. Insert the TM into the Election Manager PC's USB drive. If you have just uploaded log files, you remove and reinsert the TM to start the clean process.
4. As soon as the clean panel opens, the Election Manager detects if the TM has had its files uploaded. If all files uploaded, the user is notified to use the CLEAN button to clean the TM. If there is any error with the TM, a confirmation window appears asking the user if they want to force clean the TM.

11 Log Files and Help

11.1 OVO and OVI Machine Logs

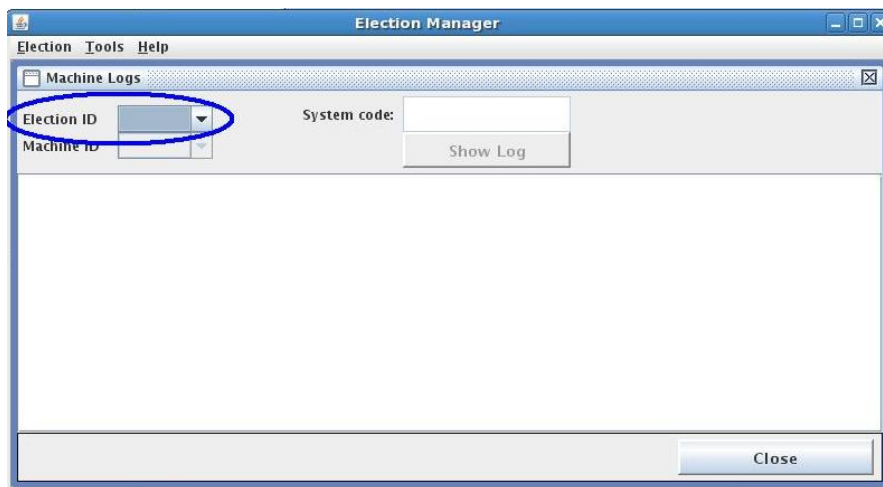
Machine Logs are the Administrative (Admin) Logs created by each OVO and OVI. The Election Manager uploads these logs from the Transport Media (TM). See [TM Upload](#) (refer to Section 10.0) to learn how to upload a TM and acquire the log.

When the admin log files are uploaded into the EM from a TM they are put in the folder ‘\Voting\AdminLog\Election_XXX\Machine_UNIyyyyyy’. The ‘XXX’ is the Election ID and the ‘yyyyyy’ is the OVO/OVI/OVCS machine ID (IP).

The admin log files are stored in clear text so it can be read by any editor program.

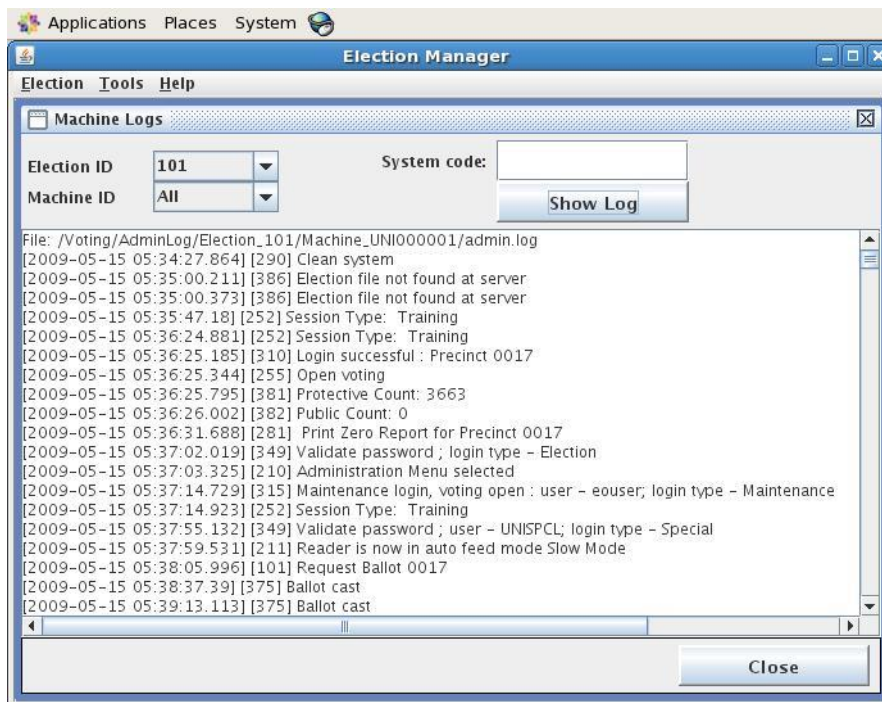
To view a Machine Log using the EM application:

1. Open the Tools menu and select Machine Logs.
2. Select an election.
Click the Election ID drop-down list and select an Election to view.



3. If you wish, select a specific OVO or OVI Machine.
Use the drop-down to view and select a machine with a log accessible to the Election Manager.

4. You may enter a specific system code (or codes).
If you enter more than one code, separate them with commas. Please refer to the *Warehouse Technician's Guide* documents (OVO and OVI) for an explanation of the system codes.
5. Click **Show Log**. The selected logs appear one page at a time.
6. To page through the log display click **Next** or **Prev**.



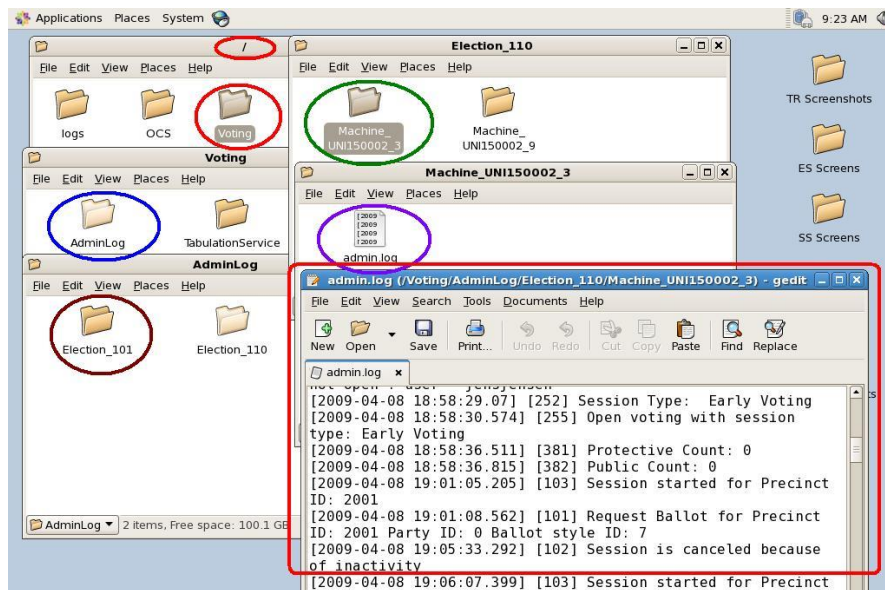
To access a Machine Log via the file system (or to copy file off to a removable device)

Go to the follow folder where the Machine Logs (OVO/OVI admin logs are maintained):

'\Voting\AdminLog\Election_xxx\Machine_UNIyyyyy'.

The 'xxx' is the Election ID and the 'yyyyyy' is the OVO/OVI/OVCS machine ID (IP).

The admin log files are stored in clear text so it can be read by any editor program.

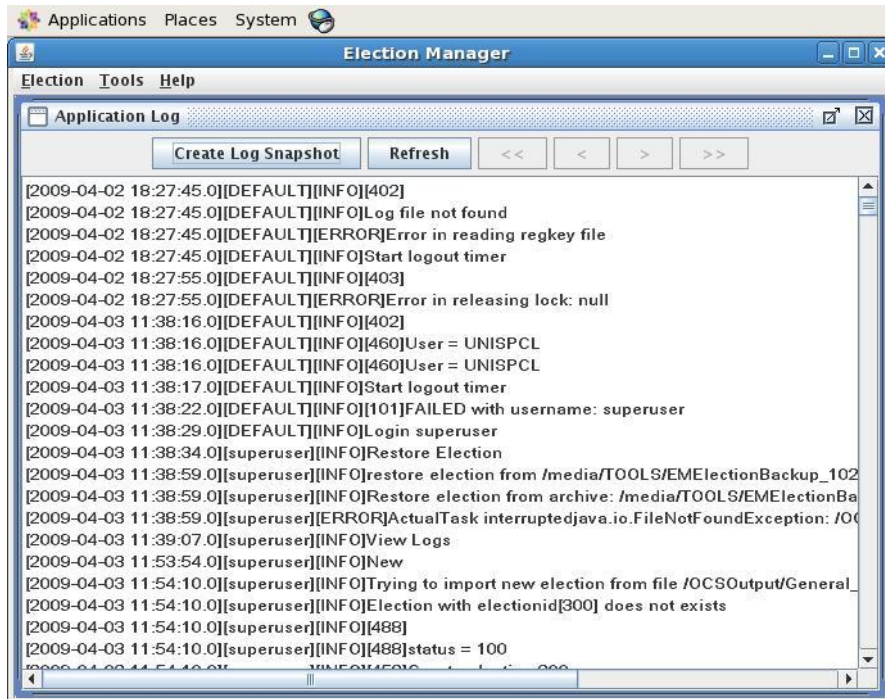


11.2 Application Log

The Application Log collects events from the application, such as login and updates to the database. An Admin or Superuser can view this log at any time to track use of the Election Manager program and to ensure that no unauthorized access attempts have occurred.

To access the Application Log:

1. Open the **Help** menu and select **View Logs** to view the current application activity log.
2. The Application log contains a date and time for activities that occur within the application, beginning the first time the application was opened. Each log file entry starts with a date/time stamp.



3. Use the buttons to refresh and navigate through the log. See explanations below.



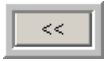
Create Log Snapshot

Creates a file of the current log contents. The popup window displays the folder name and file name where this log snapshot was written.



Refresh

Click to update the contents of the log file in the viewer.



<<

Click this button to go to the beginning of the log file.



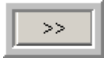
<

Click to go to the previous page of the log.



>

Click to go to the next page of the log.



>>

Click to go to the end of the log.

11.3 Database Backup and Restore

EM Backup and Restore is automated for the Election specific information (election files, Election specific data/options, sound files, and Machine Logs from OVO, OVI, and OVCS units). Backups should be done after the Election CD is created and then again once all TMs have been processed following the election (to ensure OVO, OVI and OVCS Logs have are captured).

In the case of a serious failure of the system (where the BLM and EM are on the same PC), it is recommended that the Election Manager application be reinstalled after the Ballot Layout manager has been reinstalled and the BLM database and past BLM Election definitions have been recovered from the most recent BLM backup.

It is recommended that the user manually backups up the following information when an election is exported and maintained for audit purposes.

- Reports
- Snapshot of the Application Log taken at the time Election is Exported (created into an Election CD) and again after all Machine Logs have been captured.

The EM backup and restore does not include EM user accounts (Superusers and Admin user accounts are not backed up) or the EM application log. If the system needs to be reinstalled, the user accounts information will have to be reentered and new passwords assigned.

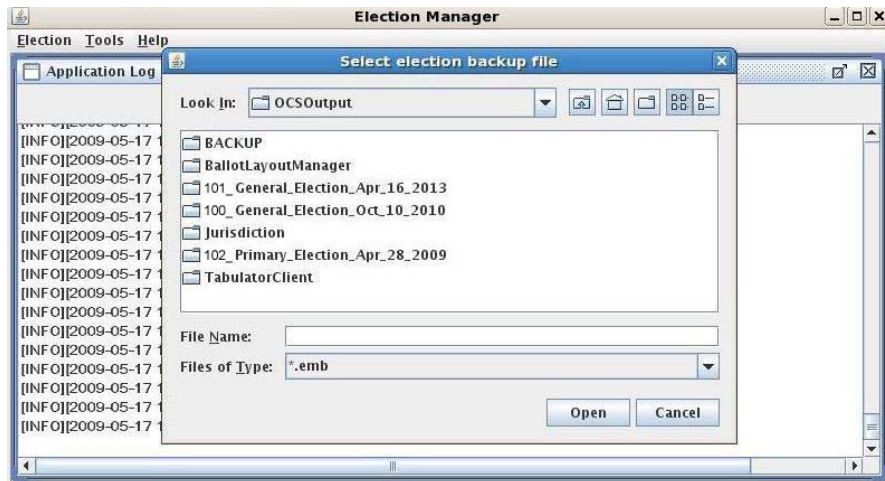
A backup can be performed by both EM Admin users and Superusers. The Restore function can only be performed by an EM Superuser.

In addition to backups for audit purposes, regular backups of the election being worked on should be done to minimize lost work in case of a PC HW issue.

For permanent storage, the jurisdiction should copy all exported Election files to CD-ROM or external disk and store the CD or storage device in a safe and separate location.

To back up the database:

1. Open the election you want to backup.
2. Open the Tools menu and select Backup.

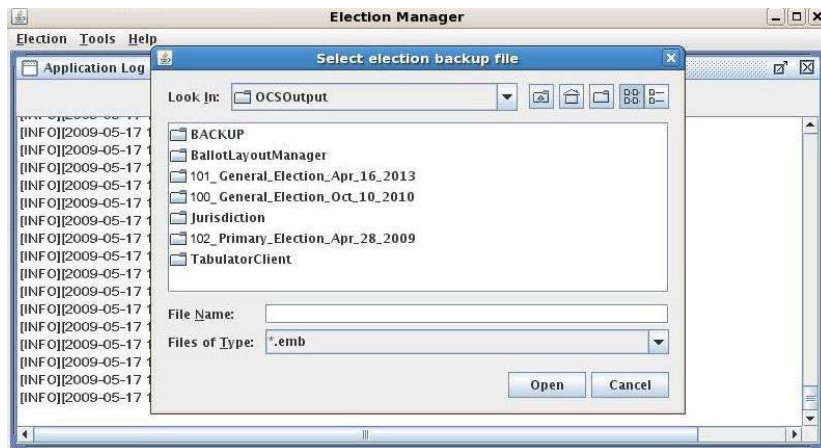


3. Destination directory cannot be changed, launch the backup.

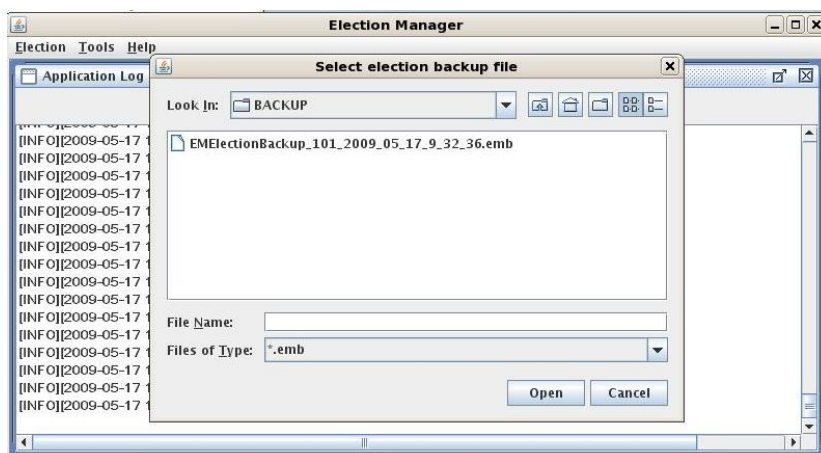
To restore the database:

The restore procedure overwrites the current data tables, returning them to their state at the time the backup was created.

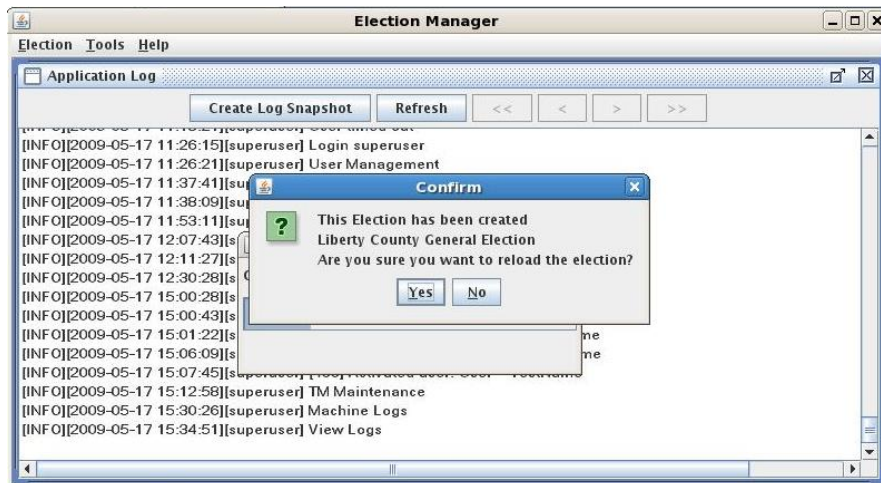
1. Close all elections on the Election Manager desktop.
2. Open the Tools menu and select Restore.
3. Select the Backup Folder and click Open



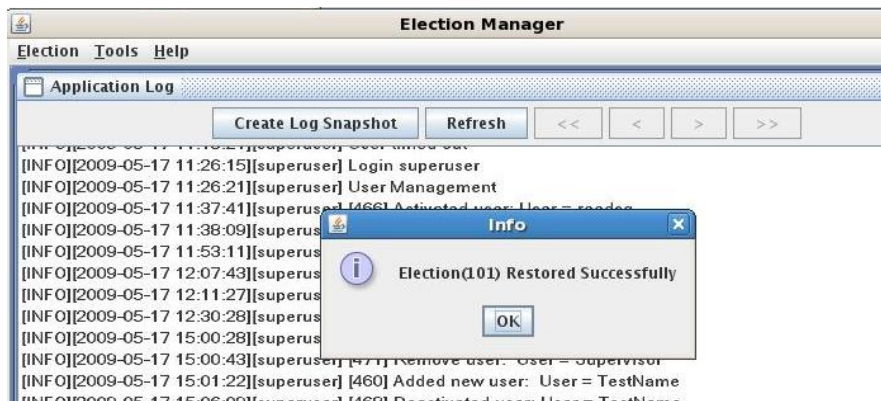
4. Select the Backup to recover and Click Open



- The system will then prompt for restore confirmation.



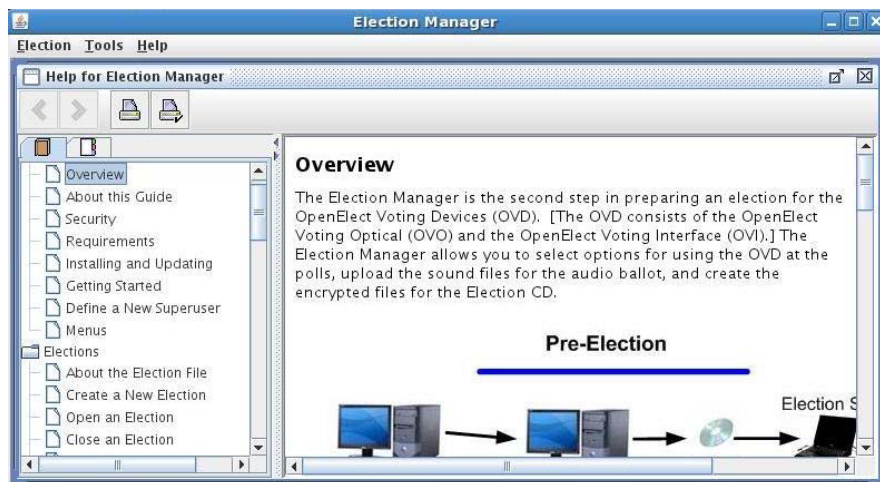
- The system will indicate if the restore was successful or an error occurred



11.4 Help

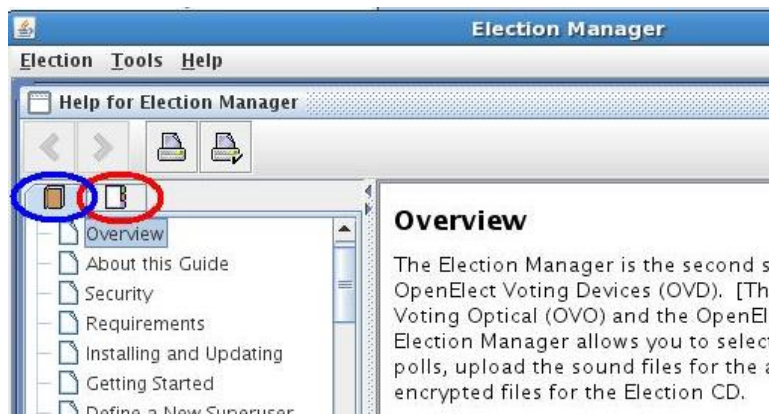
Help Topics

When you click on Help/Help Topics, the following window displays presenting the Help topics related to the Election Manager application.



The left panel of the window provides the topics available and enables the user to click on the topic and go directly to that page of the topics. The user can access the topics by the tab at the top of the left panel:

1. By section (Left or Blue Circle below)
2. By topic (Right or Red Circle below)



11.5 About Unisyn

When you click on Help/Unisyn, the following window displays presenting the Application Version number and the Linux OS Version number:



Appendix A – User Interface Error Messages

| Error Text | When the Error Message Occurs | User Action to be Taken |
|--|--|---|
| Valid timeout value should be between 120 and 600 | When OVI timeout value that is not in the range of 20-600 is entered on election option screen. | Enter a valid timeout value for OVI time out setting on election option screen. |
| Valid timeout value should be between 20 and 600 | When invalid OVO timeout value entered on election option screen. | Enter a valid timeout value for OVO time out setting on election option screen. |
| Please Enter a value | Click Edit Password button for election password entry on election option panel. Click Enter on Election Password dialog without enter anything for password and verify entries. | Enter a valid election password |
| Passwords must be 7 characters | Click Edit Password button for election password entry on election option panel. Enter a password with less than 7 characters. | Enter a valid election password |
| Password must contain at least 1 non-numeric character | Click Edit Password button for election password entry on election option panel. Enter a password that has all numeric digits. | Enter a valid election password |
| Password must contain at least 1 non-alpha character | Click Edit Password button for election password entry on election option panel. Enter a password that has no numeric digits. | Enter a valid election password |
| Try again... Password and Verify fields did not match | Click Edit Password button for election password entry on election option panel. Enter a valid password and enter something different in verify field. | Enter the same valid password in password field and verify field. |

| Error Text | When the Error Message Occurs | User Action to be Taken |
|---|---|---|
| The application is already running. | Start EM application and try to start another instance of the EM application. | Close the dialog and use the EM application that's running. |
| Tabulator Client application is running. Please close Tabulator Client application and restart Election Manager. | Start EM application while Tabulator Client application is running on the same machine. | Close the Tabulator Client application and try to start Election Manager application again. |
| Error in starting/running application | This problem may only occur when there is problem when the system or application installation. | If problem persists, contact system administrator. |
| <i>soundfilepath</i> is not found | Playing a file that is missing from the system | Re-upload the sound file |
| <i>soundfilepath</i> is corrupted | Playing a corrupted mp3 sound file | Re-upload the sound file |
| <i>soundfilepath</i> failed to play | Error playing a sound file | Re-upload the sound file |
| Please select the user role | Add a new user without select a user role | Select a user role |
| Please enter the user name | Add a new user without enter a user name | Enter a valid user name |
| Sorry, the password must be between 7 and 15 characters. And have at least one number and one letter. Please try again. | Add a new user with valid user name and user role. On password entry dialog, click 'Enter' with invalid password entry. | Enter a valid user password |
| Sorry, the password does not match the confirmation. Please try again. | Occasion | Make sure verify entry has the same content as the password entry. |
| User name must be greater than 5 characters | When OVI timeout value that is not in the range of 20-600 is entered on election option screen. | Enter a valid user name |

| Error Text | When the Error Message Occurs | User Action to be Taken |
|---|--|---|
| Please Enter a value | When invalid OVO timeout value entered on election option screen. | Enter a valid user password |
| Invalid Input File: xxx | Click Edit Password button for election password entry on election option panel. Click Enter on Election Password dialog without enter anything for password and verify entries. | Use a valid election.enc file to import new election. |
| Loading election failed. Invalid input file | Click Edit Password button for election password entry on election option panel. Enter a password with less than 7 characters. | Use a valid election.enc file to import new election. |
| Invalid data set on TM. Do you still want to clean TM? | Click Edit Password button for election password entry on election option panel. Enter a password that has all numeric digits. | User can choose to set the TM aside for further investigation or force a TM clean. |
| Audit log file upload error | Click Edit Password button for election password entry on election option panel. Enter a password that has no numeric digits. | Try again. If problem persists, put the TM aside. |
| No OVI receipt file is found. Log file cannot be uploaded. | Click Edit Password button for election password entry on election option panel. Enter a valid password and enter something different in verify field. | User shall take the TM back to OVI machine and see if the voting is closed. |
| Votes have not been uploaded to central tabulation system. Log file cannot be uploaded. | Start EM application and try to start another instance of the EM application. | Upload the content of the TM to Tabulator first then try to upload log on EM again. |

| Error Text | When the Error Message Occurs | User Action to be Taken |
|---|--|--|
| Exited without entering password | Start EM application while Tabulator Client application is running on the same machine. | Close the dialog and do nothing or try to enter the password again. |
| The exported election cannot be deleted | This problem may only occur when there is problem when the system or application installation. | Don't try to delete election in exported state. |
| Concluded election can only be deleted 22 months after election day | Playing a file that is missing from the system | Delete the concluded election 22 months after election day. |
| Error in updating sound status | Playing a corrupted mp3 sound file | Try to update and save the status again. If problem persists, contact administrator. |
| The sound file xxxx is missing | Error playing a sound file | re-upload the sound file |
| Error occurred while deactivating xxxx | | Try to deactivate the user again. Contact administrator if problem persists. |
| Error occurred while activating xxxx | Add a new user without select a user role | Try to activate the user again. Contact administrator if problem persists. |

| Error Text | When the Error Message Occurs | User Action to be Taken |
|---|--|--|
| Error occurred adding user | Add a new user without enter a user name | Try to add the user again. Contact administrator if problem persists. |
| Error occurred while updating password for xxxx | Add a new user with valid user name and user role. On password entry dialog, click 'Enter' with invalid password entry. | Try to update the password again. Contact administrator if problem persists. |
| SQL Error: n records found for user xxxx | Occasion | Contact administrator. System is messed with. |
| Error occurred while updating role for xxxx | When OVI timeout value that is not in the range of 20-600 is entered on election option screen. | Contact administrator. System is messed with. |
| User name xxxx is reserved | When invalid OVO timeout value entered on election option screen. | Avoid using the reserved user name. |
| User name must contain at least 1 non-numeric character | Click Edit Password button for election password entry on election option panel. Click Enter on Election Password dialog without enter anything for password and verify entries. | Enter a user name contains at least one non-numeric character |
| xxxx already exists | Click Edit Password button for election password entry on election option panel. Enter a password with less than 7 characters. | Enter a unique user name |
| Invalid User Type - xxxx | Click Edit Password button for election password entry on election option panel. Enter a password that has all numeric digits. | The user type is invalid |

| Error Text | When the Error Message Occurs | User Action to be Taken |
|---|--|---|
| Duplicate OE User Name Exists | Click Edit Password button for election password entry on election option panel. Enter a password that has no numeric digits. | Contact administrator. System is messed with. |
| Invalid Request | Click Edit Password button for election password entry on election option panel. Enter a valid password and enter something different in verify field. | Contact administrator. System is messed with. |
| Error in playing file xxxx | Start EM application and try to start another instance of the EM application. | re-upload the sound file |
| The application experienced a problem executing query (or queries). Please retry. If problem persists please contact administrator. | Start EM application while Tabulator Client application is running on the same machine. | Click OK button on the dialog. Check input data. Contact administrator if problem persists. |
| The application failed to connect to DB server. Please contact administrator. | This problem may only occur when there is problem when the system or application installation. | Click OK button on the dialog. Try to restart the application or restart the machine. If problem persists, contact administrator. |
| The application cannot run on xxxx | Playing a file that is missing from the system | Contact administrator. |
| Failed to access db.properties file or connect to database | Playing a corrupted mp3 sound file | Contact administrator if problem persists |
| This task cannot be cancelled | Error playing a sound file | Stop cancelling the task and wait for the task to be finished |
| Sorry, the username or password you entered is invalid. Please try again. | | Enter valid username/password to login |

Appendix B – EM System Limits

| Value | Limit | Input Type |
|---------------------------|--|------------|
| Election Manager | | |
| Max # of Elections | 8 | |
| Election Options | | |
| Fields | | |
| Allow Add Precinct | checked = true, unchecked = false | Checkbox |
| Password Protect Election | checked = true, unchecked = false | Checkbox |
| Allow PA Rule | checked = true, unchecked = false | Checkbox |
| Full Voter Ballot Review | checked = true, unchecked = false | Checkbox |
| Consolidate Splits | checked = true, unchecked = false | Checkbox |
| OVI Voter Timeout | Number Range: 120-600 | Text |
| OVO Voter Timeout | Number Range: 20-600 | Text |
| Undervote Checking | Possible Values: No Undervote Check, Check All Contests, Check Selected Contests | Drop Down |
| Election Password | 7 Digit Alphanumeric | Text |
| Election Password Confirm | 7 Digit Alphanumeric | Text |
| Technical Support Number | 30 Digit Alphanumeric | Text |
| Enforce Close Polls Time | checked = true, unchecked = false | Checkbox |
| Close Time: Hours | Number Range: 01 - 12 | Drop Down |
| Close Time: Minutes | Number Range: 00, 15, 30, 45 | Drop Down |
| Close Time: AM/PM | Possible Values: AM, PM | Drop Down |
| Printing Options | | |
| Fields | | |
| Auto Print Alerts | checked = true, unchecked = false | Checkbox |

| Value | Limit | Input Type |
|---------------------------|---|------------|
| Auto Print Voter Receipts | checked = true, unchecked = false | Checkbox |
| Display Contest Results | checked = true, unchecked = false | Checkbox |
| Ballot Type | Possible Values: FULL, COMPRESSED, WRITEIN | Drop Down |
| # of Tally Reports | Number Range: 1-9 | Drop Down |
| Alert Report Header | 18 Digit Alphanumeric | Text |
| Signature Line | 50 Digit Alphanumeric | Text |
| Audio Options | | |
| Fields | | |
| Separate Party Sound | checked = true, unchecked = false | Checkbox |
| User Management | | |
| Fields | | |
| User Name | 5 to 15 Digit Alphanumeric | Text |
| User Role | Possible Values: Superuser, Supervisor, Maintenance, Admin User | Text |
| Password | 7 - 15 Digit Alphanumeric | Text |
| Verify | 7 - 15 Digit Alphanumeric | Text |

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