

ClearCount™ Election Administrator's Guide

Version 1.9



Clear Ballot

ClearCount Election Administrator's Guide

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Preface

ClearCount is a central count paper-based optical scan voting system. ClearCount utilizes modern software architecture and scalable unmodified commercial-off-the-shelf (COTS) hardware to provide a faster, lower cost, and higher performing election experience.

Audience and scope

This guide is intended for election officials and their delegates who run central-count elections. It describes in detail how to use ClearCount during and after an election. It also describes typical system administration tasks.

For pre-election tasks, see *ClearCount Election Preparation and Installation Guide*.

Using this guide

After providing an orientation to the ClearCount product, this guide walks you through the scanning, review, and administrative functions of a central-count election.

Chapter 1. Scanning ballots

Includes instructions for scanning and reboxing the ballots. It also provides routine troubleshooting solutions.

Chapter 2. Using election reports

Describes how election officials can access and analyze reports as well as the actual ballot images.

Chapter 3. Resolving ballot issues

Describes how election officials can address unreadable ballots.

Chapter 4. ClearCount administration

Describes how to manage elections and users.

Chapter 5. ClearCount log files

Describes the Election and Web Activity logs.

Chapter 6. Interrupting and resuming scanning

Describes how to shut down and restart ClearCount while scanning is in process.

[Appendix A. Login credential rules and guidelines](#)

Provides rules and guidelines for setting passwords for accessing Election Administration Stations, but which are also applicable to ScanServer and ScanStation access.

[Appendix B. Process flows](#)


Provides summaries of the various stages of the election process.

[Appendix C. ClearCount messages](#)

Lists warnings, recoverable errors, and fatal errors.

Notation conventions

The following conventions are used in this manual:

Convention	Purpose
Bold	Denotes clickable selections on web pages and dialogs.
<i>Italics</i>	Denotes placeholders for user-defined values.
Monofont	Denotes product keywords and system commands.
	Indicates noteworthy information.

Contact us

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Chapter 1. Scanning ballots

The ballot scanning process is a critical component to a successful election. Several manual steps are required, each of which needs to be administered in a careful manner. This chapter provides detailed instructions for each step in the scanning operation.

In order to facilitate the most efficient scanning process, proper setup and preparation work needs to be in place before you begin. See *ClearCount Election Preparation and Installation Guide* for full details.

1.1 Maintaining ScanStation security

To maintain ScanStation™ security, only election officials or supervisors with appropriate privileges should:

- Know the Windows credentials for ScanStation computers.
- Know the password for the Tabulator user.
- Have access to the DeleteBox utility.

When it is necessary to restart processes or correct errors, ScanStation operators must therefore seek help from their supervisors.

1.2 Ballot scanning steps

The process begins when the scanner operator is presented with a box of ballots.

1. [Start Tabulator.](#)
2. [Load the target card.](#)
3. [Scan the target card.](#)
4. [Verify the target card \(file location and name\).](#)
5. [Load the first batch of ballots on the scanner.](#)
6. [Scan the first batch of ballots.](#)
7. [Remove the first batch of ballots from the scanner.](#)
8. [Scan the remaining batches of ballots.](#)
9. [Transfer scanned ballots to the ballot box.](#)
10. [Finish the ballot box and close out the batch.](#)



It does not matter how many ballots are in each box or the order in which they are sent or received by election officials. The preparation team divides these boxes into smaller subsets and assigns their own box numbers with labels during the scanning process. Labels affixed to the outsides of boxes facilitate Image-to-Ballot Traceability.

1.2.1 Step 1: Start Tabulator

Supervisors should start ClearCount software on each ScanStation before operators begin scanning. Do as follows:

1. Access the file system:

On a Windows 7 system

Select **Start > All Programs > Accessories > Windows Explorer**.

On a Windows 8 system

From the **Start** page, search for **File Explorer**.

2. From the left pane of the window that appears, double-click the P: drive.
3. Double-click the StartTabulator.cmd file.

A command window and then the **ScanStation Password** dialog appear.



Windows 7 users may first see this unverified publisher warning, which can safely be dismissed by clicking **Run**.

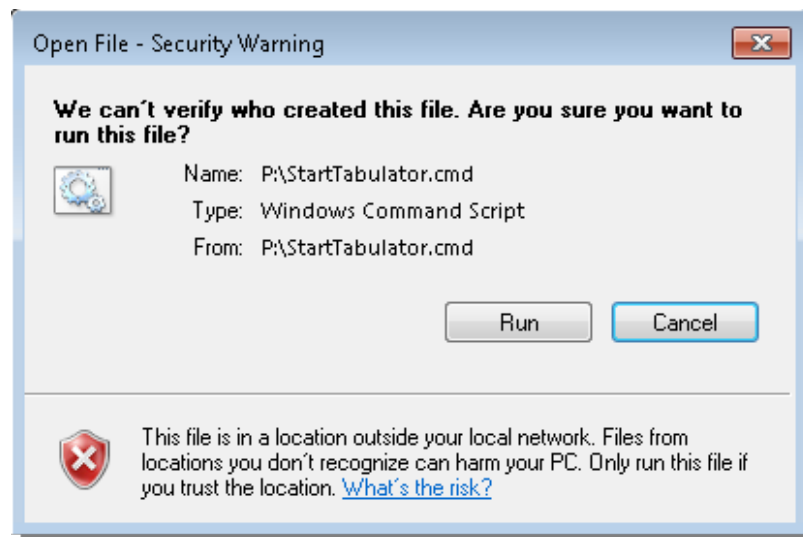


Figure 1-1. Windows 7 unverified publisher warning

4. In **Enter ScanStation password**, enter the ScanStation operator password.

5. Click **OK**.

The Tabulator window appears.

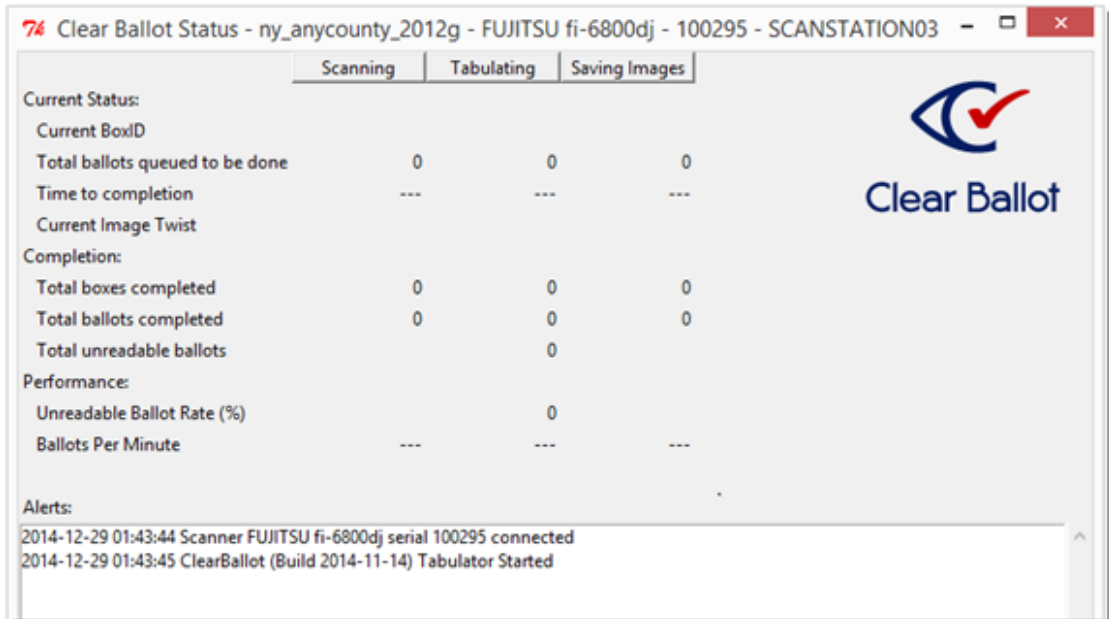


Figure 1-2. Tabulator window

6. Check the status bar along the top of the window, which is highlighted in the preceding figure. It should display the:
 - Name of the active election (for example, *ny_CountyName_2014g*)
 - Model of the scanner connected to the ScanStation (such as Fujitsu fi-6800dj)
 - Serial number of the scanner (such as 100295)
 - Name of the ScanStation computer (for example, SCANSTATION10)

This information should always be readily visible on the ScanStation for confirmation. If it is not, an operator should consult with their supervisor. If any of this information is missing or incorrect, do *not* load the target card as directed in Step 2: Load the target card on the facing page. Quit Tabulator and work with the supervisor to correct the information. An:

- Incorrect election name—Indicates the incorrect election is currently set as the active election. A user with dbadmin access level must set the correct election. (See Changing the active election on page 92.)
- Incorrect or missing scanner model or serial number—Can indicate that the scanner update script did not run properly. Rerun the appropriate update script as described in *ClearCount Election Preparation and Installation Guide, Running the Update Script*.

1.2.2 Step 2: Load the target card

Each batch of ballots to be scanned requires a *target card*, which is a job separation sheet. The target card is always scanned first. The following is a sample target card:

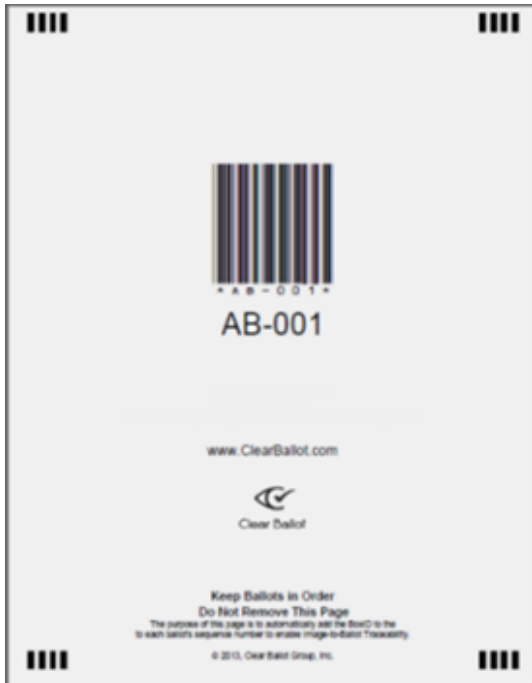


Figure 1-3. Sample target card (not actual size)

Clear Ballot Group maintains default target cards as PDF files, which are always downloadable from <http://clearballot.com/Support/TargetsAndLabels>. ClearCount then uses the barcode on the target card scanned for a particular batch to record unique ballot identifiers in the database and name the corresponding ballot image files. See *ClearCount Election Preparation and Installation Guide, About target cards and box labels*.

Typically, all of the ballots in a box belong to one batch and are associated with the same target card and box label. It is possible for a box to contain more than one batch. In this case, each batch is differentiated by its target card.

The target card is loaded on the scanner input tray. Place the card:

- **Face up**—If using fi-6800.
- **Face down**—If using fi-6670 or fi-7180.

The following shows placement on an fi-6800 scanner.



Figure 1-4. Target card loaded in tray (fi-6800 scanner shown)

1.2.3 Step 3: Scan the target card

On the scanner front panel, press the **Scan** button to scan the target page.



Figure 1-5. Scan button on scanner front panel (fi-6800 scanner shown)

If Tabulator has appropriately recognized a target card, it displays an alert indicating that it has found a probable target card as shown in the following figure.

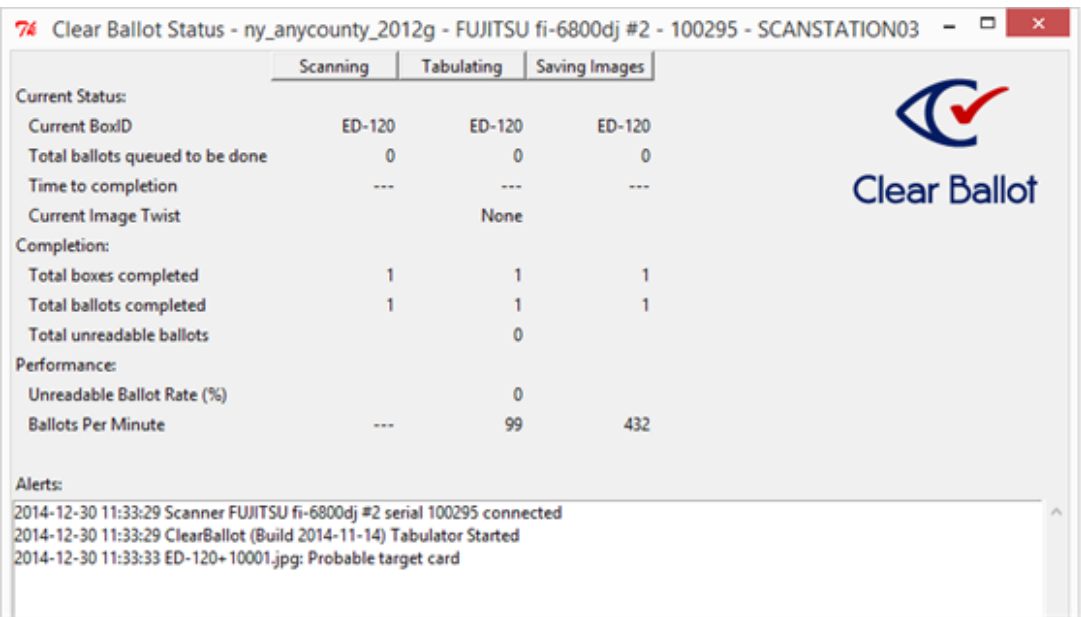



Figure 1-6. Tabulator recognizes probable target card

 The value of Current Box ID (in this example, ED-120) in the **Scanning** column matches the prefix in the image file name.

1.2.4 Step 4: Verify the target card information

Do as follows:

1. Verify that the file location and name displayed by the Tabulator (under **Alerts**) matches the target card identifier and box label.
2. Verify that the correct box ID appears in the **Scanning** column of the Tabulator display.



If ballots from a previous box are still being processed, you may see the previous box ID in the **Tabulating** or **Saving Images** columns.

3. If an improper target card was scanned or the target card was scanned improperly, delete the box and scan the appropriate card.

1.2.5 Step 5: Load the first batch of ballots

Insert a stack of ballots onto the input tray of the scanner as shown in the following figure.

Scanner model	Ballot stack size (90 lb stock)
fi-6800	No more than 210 ballots (1.5 inches)
fi-6670	No more than 70 ballots (0.5 inch)
fi-7180	No more than 40 ballots (0.25 inch)



Figure 1-7. Loading first batch of ballots

1.2.6 Step 6: Scan the first batch of ballots

Start scanning the ballots by pressing the **Scan** button on the scanner. If the batch scan from the target page scan is still active, a ScandAll PRO™ message should have appeared after the target card was scanned:

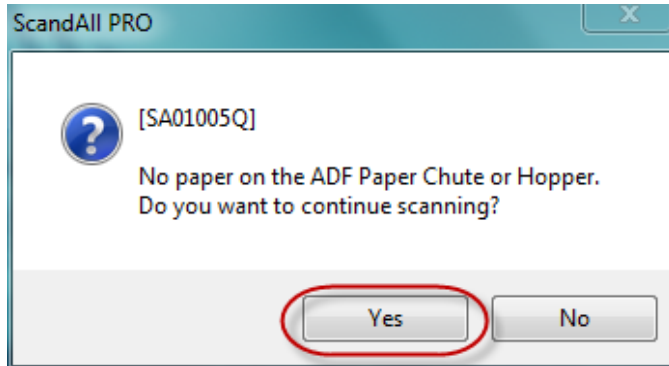


Figure 1-8. ScandAll PRO continue scanning message

Click **Yes**. The scanner continues scanning all of the ballots on the input tray. After the first batch of ballots is scanned, this message reappears.

1.2.7 Step 7: Remove the first batch of ballots

Transfer the scanned ballots from the output tray to the scanned ballot box.



After scanning ballots, you must maintain the sequence. Remove the ballots from the output tray and place them face down in the box or scanned ballot area with the target card on the bottom.



Figure 1-9. First batch of ballots removed (fi-6800 scanner shown)

1.2.8 Step 8: Scan the remaining ballots

Repeat steps 4 through 7 until all batches of ballots for the box are scanned and placed face down in the box or scanned ballot area.



Figure 1-10. Remaining ballots placed face down (fi-6800 scanner shown)

1.2.9 Step 9: Transfer the scanned ballots

If the scanned batch of ballots is not already in the box, transfer it from the table to the box with the matching label.



The target card should be *face down* in the box.

1.2.10 Step 10: Finish the ballot box and close out the batch

Initial the ClearCount box label to indicate that its ballots were scanned. Transfer the box to the designated area where it can be safely sealed and stored, or wait for the appropriate official to collect the box.

When all of the ballots are scanned and returned to the box, you must close out the batch in ScandAll PRO. The following message reappears:

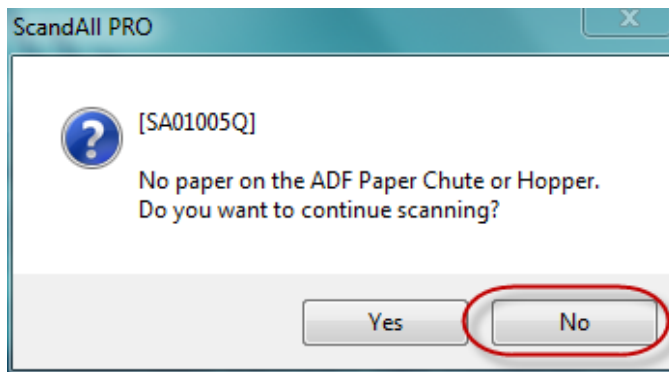


Figure 1-11. Scanner message signaling end of batch

Click **No** to complete the batch.

1.3 Troubleshooting scanning issues

This section discusses how to fix common scanning problems.



See ClearCount messages on page 135 for complete lists of warnings and errors. For additional troubleshooting assistance, refer to the Fujitsu scanner documentation or contact Clear Ballot Group Technical Support.

Some errors may require rescanning a box. When rescanning is required, it is necessary to first delete the scanned portion of the affected box. For this reason, operators should *immediately* stop what they are doing and alert a user whose access level is [modify](#) or above, such as a supervisor, if:

- They are unsure how the system is responding to the presenting error.
- Ballots that are already scanned are placed out of their original scanning order.

If there are any doubts regarding data integrity, the privileged user deletes the box the scanner operator rescans the entire box. Box deletion methods include:

- Deleting a box from a functioning ScanStation below
- Deleting a box after a ScanStation crash on page 14

1.3.1 Deleting a box from a functioning ScanStation

Deleting a box from the ScanStation at which any or all of its ballots were scanned removes all saved images from the local station and related database entries from the ScanServer.

To delete box contents from the ScanStation at which the box was scanned:

1. Access the file system:

On a Windows 7 system

Select **Start > All Programs > Accessories > Windows Explorer**.

On a Windows 8 system

From the **Start** page, search for **File Explorer**.

2. From the navigation (left) pane of the **Explorer** window, double-click the P: drive.

3. From the right pane, double-click DeleteBox.

The command window and **Login** dialog for the **DeleteBox** tool appear.

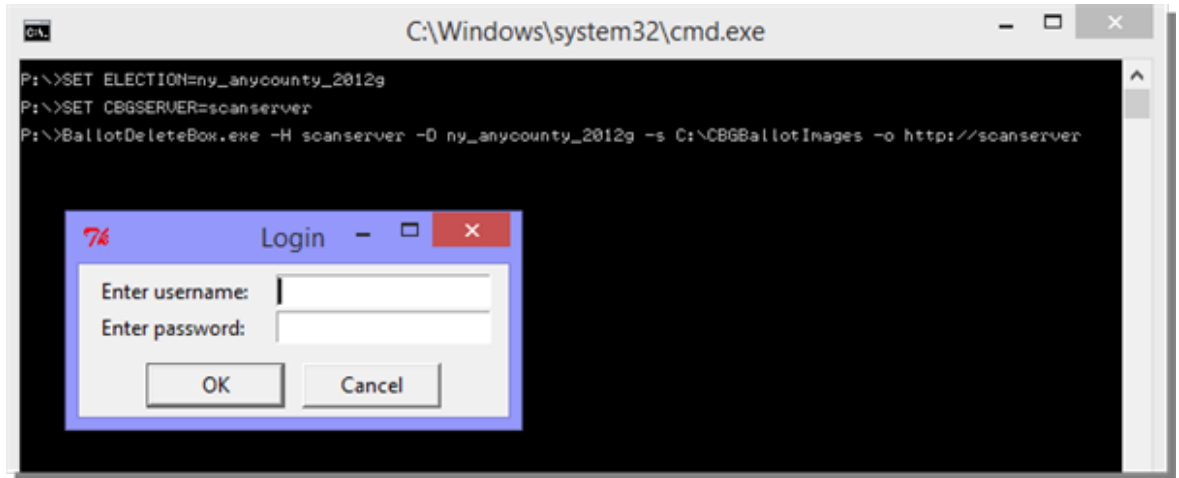

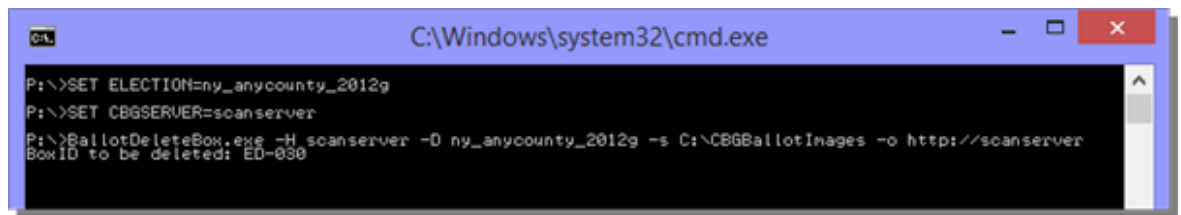


Figure 1-12. DeleteBox command window and Login dialog

4. Enter your credentials:
- In **Enter username**, supply the supervisory user name.
 - In **Enter password**, supply the supervisory password.
 -  Credentials assigned [modify](#) access are required.
 - Click **OK**.

The dialog closes and the command window prompts for the box ID.

- For **BoxID to be deleted**, supply the box ID and press **Enter**.



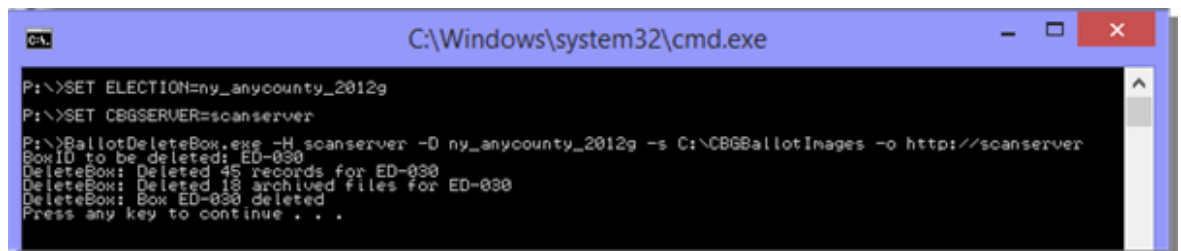
```
C:\Windows\system32\cmd.exe
P:\>SET ELECTION=ny_anycounty_2012g
P:\>SET CBGSERVER=scanserver
P:\>BallotDeleteBox.exe -H scanserver -D ny_anycounty_2012g -s C:\CBGBallotImages -o http://scanserver
BoxID to be deleted: ED-030
```

Figure 1-13. DeleteBox prompt for box ID



(If necessary) Obtain the box ID from the [Box](#) report.

All images and records related to the box are deleted.



```
C:\Windows\system32\cmd.exe
P:\>SET ELECTION=ny_anycounty_2012g
P:\>SET CBGSERVER=scanserver
P:\>BallotDeleteBox.exe -H scanserver -D ny_anycounty_2012g -s C:\CBGBallotImages -o http://scanserver
BoxID to be deleted: ED-030
DeleteBox: Deleted 45 records for ED-030
DeleteBox: Deleted 18 archived files for ED-030
DeleteBox: Box ED-030 deleted
Press any key to continue . . .
```

Figure 1-14. DeleteBox summary

- Press any key to continue.
The command window closes.

1.3.2 Deleting a box after a ScanStation crash

If a ScanStation crashes in the middle of scanning a box, BallotDeleteBox.exe must be launched from the command line at an Election Administration Station. Do as follows:

- Open a command window on an Election Administration Station:
On a Windows 7 system
Select **Start > All Programs > Accessories > Command Prompt**.
On a Windows 8 system
From the **Start** page, select **Apps > Windows System > Command Prompt**.
- Type the following command and press **Enter**:
P:\DeleteBox --force
- Enter your user name and password.

4. When prompted, enter the box ID for the box you want to delete and press Enter.



This action deletes the election data but it cannot delete any ballot images from the hard drive of the defunct ScanStation computer. Therefore, if the ScanStation computer recovers, make sure to delete the entire contents of the C:\CBGImages folder.

1.3.3 Accessing the Fujitsu fi-Scanner Error Recovery Guide

Fujitsu fi-Scanner Error Recovery Guide is a valuable resource that can help troubleshooting scanner errors. When a scanner error occurs, a dialog similar to the following one appears.

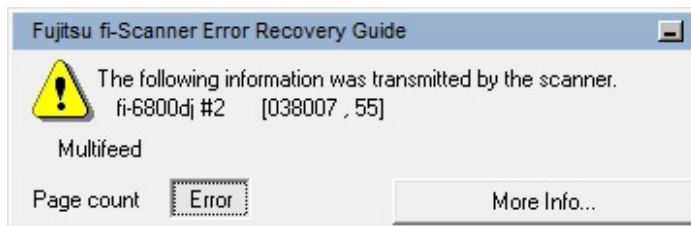


Figure 1-15. Fujitsu fi-Scanner Error Recovery Guide access

Click **More Info** to display the relevant section of the *Error Recovery Guide*.

To dismiss the dialog, click _ in the top right corner.



To see the guide, you must either install it with the scanner drivers or download the appropriate version for your scanner from the Fujitsu web site. For more information, see *ClearCount Election Preparation and Installation Guide, Installing the Fujitsu Scanner Error Recovery Guide*.

1.3.4 Scanner cannot sense paper in input tray

Occasionally, the scanner does not detect that a target card or ballots are in the input tray or hopper ready to be scanned. The following message appears:

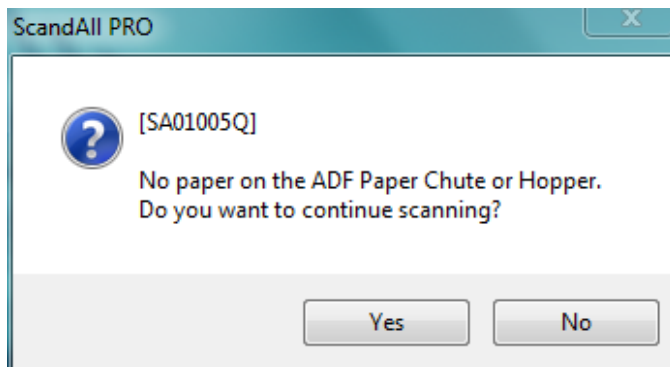


Figure 1-16. Paper in tray not sensed message

This indicates that the paper is improperly covering the sensors on the inner edge of the input tray. To resolve this problem, try one of the following:

- Push the paper further into the input tray.
- If the paper is bent or curled, hold down the interior edge of the paper while clicking the **Yes** button to start the scan. Once the scan begins, you no longer need to hold down the paper, as the scanner should be able to continue on its own.

1.3.5 Errors resulting in loss of target card identity

Some paper jams result in the scanning software losing the identity of the target card. If this occurs, do one of the following:

- Use a new target card for the remainder of the ballots.
- Delete and then rescan the box.

The result of this error should be displayed in Tabulator, indicating that the naming convention (ED-1+000X) was dropped and the scanner is now sending a file name as Separator-000X.

1.3.6 Misfeeds

Misfeeds (also called paper jams) occur when the scanner has difficulty moving a ballot through the scanner. In the event of a misfeed, a message similar to the following appears:

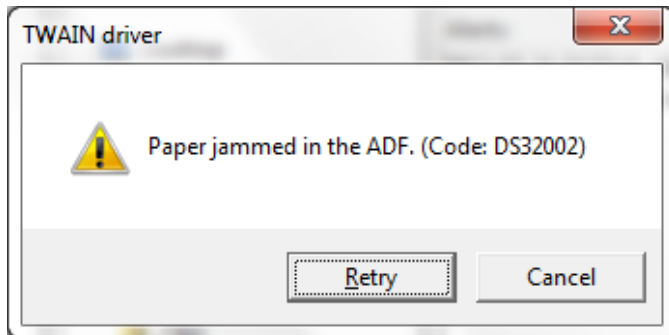


Figure 1-17. Scanner misfeed message

Misfeeds can be caused by a bent or torn page. (Sometimes the scanner itself can worsen a tear because the rollers pull on the ballot.) Alternately, they may occur when the scanner attempts to pull in more than one ballot at a time. Not jogging ballots increases the risk of misfeeds. If misfeeds continue to occur, try the following:

- Scan smaller stacks of ballots. Placing too many ballots in the hopper may increase the risk for misfeeds.
- Check for small, torn pieces of paper that might be blocking the ultrasonic sensors within the scanner.

1.3.7 Multifeeds

Multifeeds can occur when two or more pages are stuck or pulled through at the same time. The scanner can sometimes detect multifeeds using the ultrasonic sensors that check each item as it is pulled through the scanner. When a scanner senses a multifeed, it pauses scanning and provides an error message. Error messages and recommended resolutions are specific to scanner models.



In some cases a multifeed is only detected later by Clear Ballot Group's recognition software.

1.3.7.1 Multifeeds on fi-6670 scanners

The fi-6670 displays the following multifeed message:

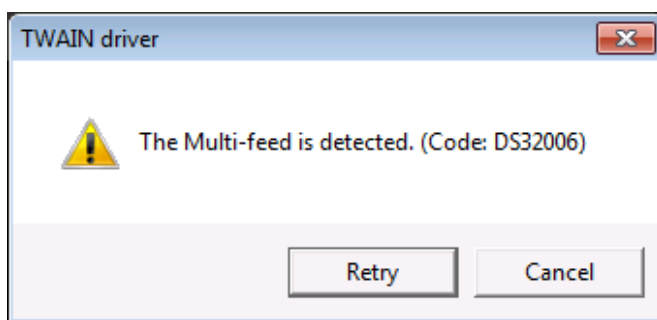


Figure 1-18. Simple multifeed detected scanner message (fi-6670)

When this message appears:

1. Open the scanner and remove the offending sheets of paper as instructed by the user documentation for your scanner model.
2. (If necessary) Separate the sheets in question, and take action to prevent them from generating a multifeed in a future scanning attempt. This could include straightening folds, or even scanning each sheet in question individually, if, for example, there is a sticky substance on the paper that is resulting in it sticking to other sheets.

1.3.7.2 Multifeeds on the fi-7180 and fi-6800

The fi-7180 and fi-6800 supply a more complex error message and also trap at least one of the questionable sheets of paper in the top of the scanner.

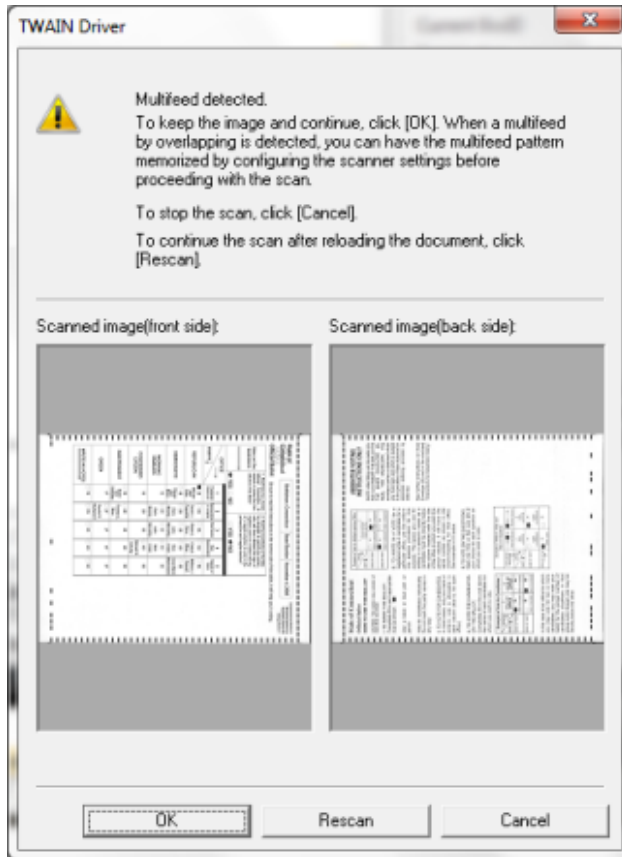


Figure 1-19. Complex multifeed detected scanner message (fi-7180 and fi-6800)

Options include:

- To keep the image, click **OK**.

If the images displayed in the message indicate that only one ballot was scanned, check the paper that is sticking out of the top of the scanner. If only one sheet is present, then you can click **OK** and continue scanning.

- To attempt to rescan the image, remove the documents in question from the scanner, reload them, and click **Rescan**.

If multiple sheets are present in either the images in the error message or stuck in the top of the scanner, then you need to rescan those sheets.

- To stop the scan, click **Cancel**.

As stated above, when in doubt, cancel the scan, delete the box, and rescan it to avoid missing ballots.

The error message also provides a view of the ballot images captured by the scanner.

1.3.8 Tabulator messages and errors

The Tabulator **Alerts** pane displays the following types of messages:

- Errors are displayed with a red background and cause the Tabulator to stop functioning. These errors require the Tabulator to be restarted, in which case the current box must be deleted and rescanned.
- Warnings are displayed on a yellow background. The information in these messages does not cause the Tabulator to stop functioning, but may still require the box to be deleted and rescanned.
- Informational messages are displayed on a white background.

See ClearCount messages on page 135 for descriptions of messages that appear on the Tabulator **Alerts** pane.

Chapter 2. Using election reports

ClearCount provides reports for communicating election data. Data is stored on the ScanServer but accessed from Election Administration Stations. This chapter describes all reports and explains how to access and share them.

2.1 Logging in as a report user

To log in to ClearCount as a report user:

1. (If necessary) Obtain the following information from your ClearCount administrator:
 - The address (URL) of the ClearCount host (ScanServer) computer
 - Your username
 - Your password
2. On the Election Administration Station, open a browser window.
3. In the address field, enter the provided URL.

The **Clear Ballot** login dialog appears.

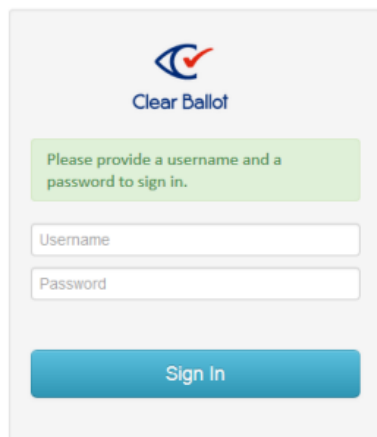
The image shows a login dialog box for 'Clear Ballot'. At the top is the 'Clear Ballot' logo, which consists of a stylized blue 'C' with a red checkmark inside. Below the logo is a green rectangular box containing the text 'Please provide a username and a password to sign in.' Underneath this box are two white input fields: the first is labeled 'Username' and the second is labeled 'Password'. At the bottom of the dialog is a blue rectangular button with the text 'Sign In' in white.

Figure 2-1. Clear Ballot Login dialog

4. In **Username**, enter your assigned case-sensitive username.
5. In **Password**, enter your assigned case-sensitive password.
6. Click **Sign in**.



The [Election Index](#) page appears.
7. From the **Election** column, select the election whose data you want to view.

The [Dashboard](#) appears.

2.2 Controls on report and log pages

Reports and log pages viewed on Election Administration Stations have the following controls in common.

Table 2-1. Common controls on report and log pages

Control	Description
Number of entries per page	Controls how many entries appear on each page, which affects the behavior of the navigation controls and scope when searching the current page. Selections include: 10; 20; 50; 100; and All.  For the Election and Web Activity logs only, <i>all</i> pages are displayed when 100 or fewer events are in the date range, no matter how many entries per page are selected.
Buttons for navigation	
First	Displays the first page of the current report.
Previous	Displays the previous page of the current report. The keyboard shortcut is p .
Next	Displays the next page of the current report. The keyboard shortcut is n .
FF	Automatically steps through the pages of the current report until the last page is reached or you press Esc . To set the speed, click once to advance every 2 seconds, twice to advance every second, three times to advance every 0.5 second, four times to advance every 0.25 second. Incremental clicks speed up forwarding; a fifth click stops it. The keyboard shortcut is f .
Last	Displays the last page of the current report.
Buttons for sharing	
Copy	Copies the entire report to the Windows clipboard for pasting into another application.
CSV	Saves the entire report in a comma-separated value (CSV) file for importing into Microsoft Excel. The path and file name are user-defined.
Print	Displays a view of the entire current report that is simplified by omitting all controls.  The print view replaces the report view in the browser window tab instead of opening in a new tab or window.

2.3 Sharing election data

All ClearCount reports can be shared with the stakeholders in an election as tabulation progresses.



The [Election Activity](#) and [Web Activity](#) logs can also be shared.

To share data:

1. [Log in to an Election Administration Station as a report user.](#)
2. From the **Election** column of the [Election Index](#), select an election.
The [Dashboard](#) appears.
3. From the Dashboard or appropriate menu, choose the item you want to share.

The selected page opens in a new tab.



The **Copy**, **CSV**, and **Print** buttons appear in the bottom right corner of all report and log pages.

4. (Optional) To copy the page to the Clipboard, click **Copy**.
The copied text can now be pasted into another application.
5. (Optional) To save the data in comma-separated values (CSV) format:
 - a. Click **CSV**.
The **Select Location** dialog appears.
 - b. (Optional) Browse to a different folder in which to save the CSV file.
 - c. In **File name**, enter the name of the CSV file.
 - d. Click **Save**.

The CSV file can now be imported into Microsoft Excel.

6. (Optional) To print the page:
 - a. Click **Print**.
The print view of the report appears in the browser window.
 - b. Access the browser's **Print** dialog.
 - c. Print the report.
 - d. Press **Esc** to return to ClearCount.

2.4 Viewing annotations on ballot images

ClearCount can provide a visually-annotated version of each ballot image that may be used for human confirmation of system results.



This capability is useful for testing ballot definitions prior to an election, as well as for countering challenges.

To review the visually-annotated version of a ballot image:

1. Access the [Dashboard](#).
2. In the [Ballot Scanning Operations](#) section, click the numeric value of **# Pages scanned (ballots and non-ballots)**.

The [Ballot Images](#) report appears.

3. Locate the ballot you want to review.
4. Double-click the ballot image.

The **Ballot Information** page appears.

5. Click the **Show visually-annotated ballot *BallotID*** link in the upper left corner of the page.

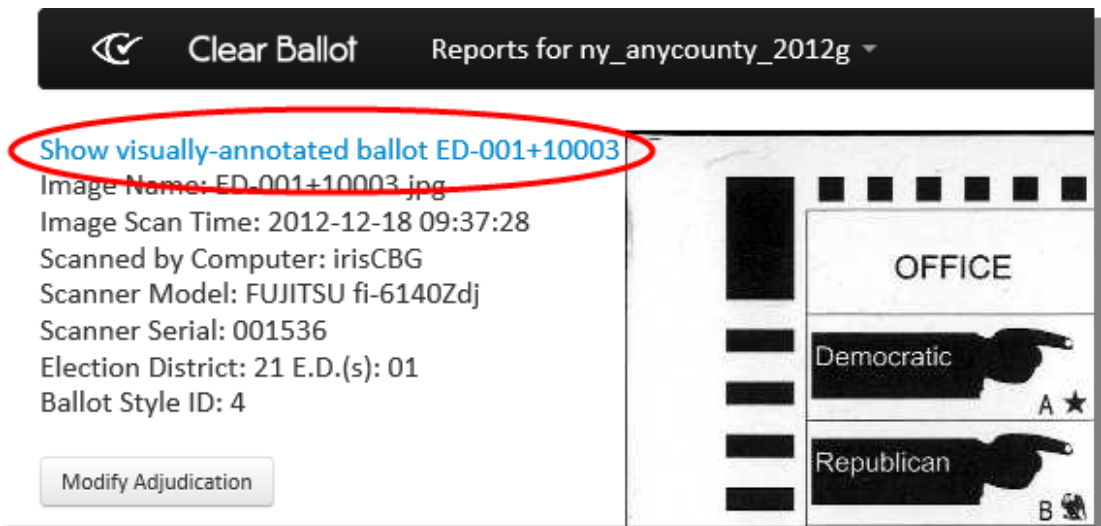


Figure 2-2. Show visually-annotated ballot ID link

The annotated version of the ballot image appears.

REPRESENTATIVE IN CONGRESS 25th District (Vote for any ONE)	STATE SENATOR 55th District (Vote for any ONE)	MEMBER OF ASSEMBLY 138th District (Vote for any ONE)	COUNTY CLERK (Vote for any ONE)
Louise M Slaughter Democratic 5A <input type="radio"/>	Ted O'Brien Democratic 6A <input type="radio"/>	Harry B Bronson Democratic 7A <input type="radio"/>	Susan M Vandervoort Democratic 8A <input type="radio"/>
Maggie Brooks Republican 5B <input type="radio"/>	Sean T Hanna Republican 6B <input type="radio"/>	Peterson A Vazquez Republican 7B <input type="radio"/>	Cheryl Dinolfo Republican 8B <input type="radio"/>
Maggie Brooks Conservative 5C <input checked="" type="radio"/>	Sean T Hanna Conservative 6C <input checked="" type="radio"/>	Peterson A Vazquez Conservative 7C <input checked="" type="radio"/>	Cheryl Dinolfo Conservative 8C <input checked="" type="radio"/>
Louise M Slaughter Working Families 5D <input type="radio"/>	Ted O'Brien Working Families 6D <input type="radio"/>	Harry B Bronson Working Families 7D <input type="radio"/>	
Maggie Brooks Independence 5E <input type="radio"/>	Sean T Hanna Independence 6E <input type="radio"/>	Harry B Bronson Independence 7E <input type="radio"/>	Cheryl Dinolfo Independence 8E <input type="radio"/>

Figure 2-3. Example of visual annotations (Dominion ballot)

Notice that:

- Each votable choice (oval) for every election is outlined by a red rectangle.
- Each valid voter selection is marked by a green bar.
- Any overvote would be marked by a red bar.

2.5 Election Index

The Election Index provides access to all elections whose data currently resides on the ScanServer computer. From the index, you can select any election whose details you want to view, causing the [Dashboard](#) for that election to appear in its own browser tab.



The Election Index is a responsive web page, meaning that the number of columns displayed varies with window size. See below for more information.

Medium Format (8 columns):

Election	Ballots	Unreadable	%	Unresolved	Ballot Type	Phase	Scan Date
ny_anycounty_2012g	7,759	46	0.59%	46	Dominion	scanning	2012-12-18

10 entries per page 1 to 1 of 1

First Previous Next FF Last Copy CSV Print

Large Format (14 columns):

Election	Images	Ballots	Unreadable	%	Unresolved	%	Boxes	Precincts	Scan Stations	Ballot Type	Phase	Scan Date	Tabulation Date
ny_anycounty_2012g	15,572	7,759	46	0.59%	46	0.59%	27	812	1	Dominion	scanning	2012-12-18	2014-09-05

10 entries per page 1 to 1 of 1

First Previous Next FF Last Copy CSV Print

Figure 2-4. Election Index ("medium" and "large" formats)

Access

The Election Index appears when you log in to an Election Administration Station.

Data

The Election Index page displays five columns when window size is less than 900 pixels, eight columns when window size is 900-1500 pixels, or 14 columns when window size is at least 1500 pixels. When archived to a CSV file or printed, all 14 columns are captured.

Data for each election includes:

- **Election**—Name of an election whose data resides on the ScanServer. Always visible.
- **Images**—Total number of images scanned for the election so far.
- **Ballots**—Number of images scanned for the election so far. Links to the [Ballot Images](#) report. Always visible.
- **Unreadable**—Number of scanned ballots requiring manual resolution. Links to the [Ballot Images](#) report. Always visible.
- **% (Unreadable)**—Percentage of scanned ballots requiring manual resolution. Requires window size of at least 900 pixels.
- **Unresolved**—Number of unreadable ballots awaiting manual resolution. Links to the [Ballot Images](#) report. Requires window size of at least 900 pixels.
- **% (Unresolved)**—Percentage of unreadable ballots awaiting manual resolution.
- **Boxes**—Number of boxes scanned for the election. Links to the [Box](#) report.
- **Precincts**—Number of precincts involved in the election. Links to the [Precinct and Style](#) report.
- **ScanStations**—Number of ScanStations involved in the election. Links to the [ScanStation](#) report.
- **Ballot Type**—Ballot vendor for the election. Requires window size of at least 900 pixels.
- **Phase**—Current phase of the election. One of: scanning, reviewing, or closed. Always visible.
- **Scan Date**—Date on which scanning occurred or started. Value is a time stamp (yyyy-mm-dd). Always visible.
- **Tabulation Date**—Date on which tabulation occurred or started. Value is a time stamp (yyyy-mm-dd).

2.6 Dashboard

ClearCount displays the Dashboard for each election. The Dashboard uses election data to provide an overview of the current state of the scanning process, and also has a dropdown menu for accessing certain election reports.

The Dashboard contains these sections:

- [Election Data](#)
- [Ballot Scanning Operations](#)
- [Visual Resolution of Unreadable Ballots](#)
- [Ballot Reconciliation](#)

The following figure shows the Dashboard. Note that hyperlinked values access reports that present underlying details.

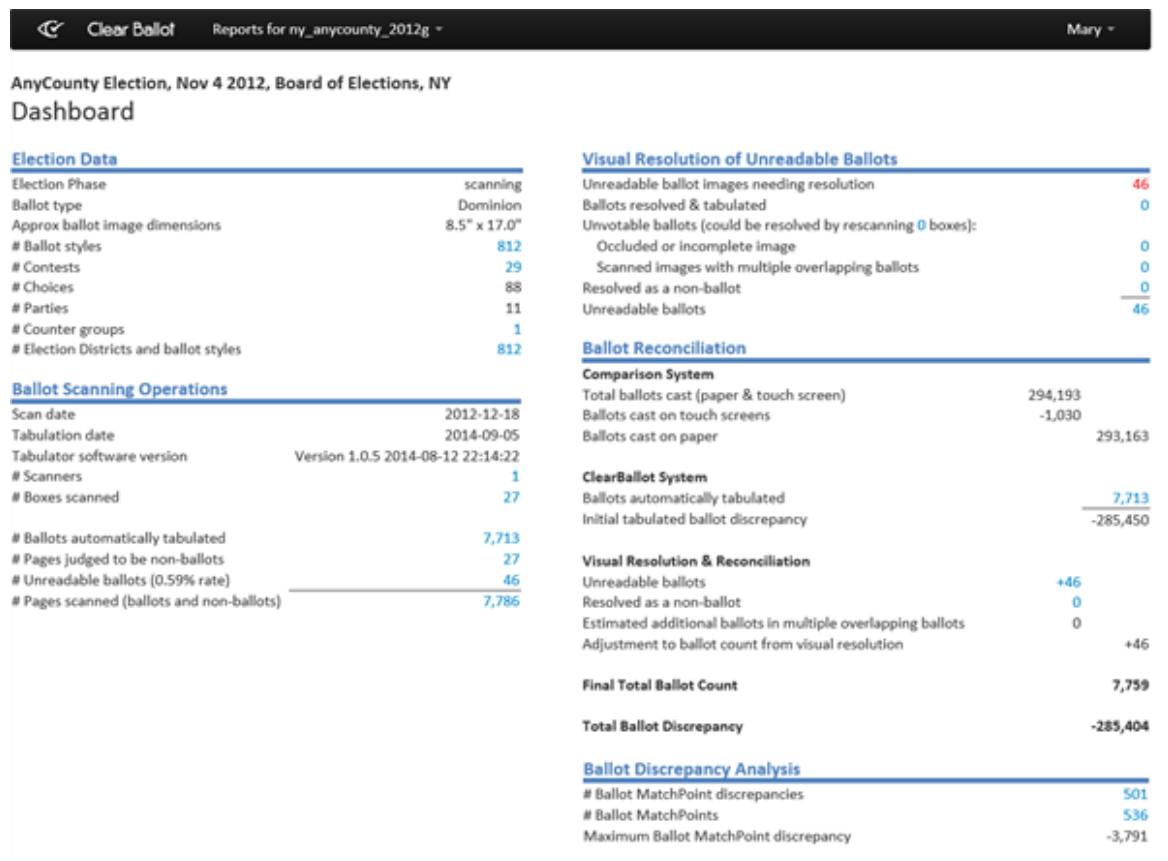


Figure 2-5. Election Dashboard

2.6.1 Election Data section

The Election Data section of the [Dashboard](#) provides basic information about the election, including:

- **Election phase**—Current phase of the election. One of: scanning, reviewing, or closed.
- **Ballot type**—Name of the certified Election Management System (EMS); can comprise the vendor and product identifier.
- **Approximate ballot image dimensions**—Height and width of the ballot style in inches.
- **# Ballot styles**—Number of ballot styles for the election. Links to the [Ballot Styles](#) report.
- **# Contests**—Number of contests in the election. Links to the [Contests](#) report.
- **# Choices**—Number of choices in the election.
- **# Parties**—Number of parties represented in the election.
- **# Counter groups**—Number of counter groups represented in the election. Links to the [Statement of Ballots Cast with Counter Groups](#) report.
- **# Precincts and ballot styles**—Number of unique combinations of precinct and ballot style. Links to the [Precinct and Style](#) report.



With the exception of the number in the **# Precincts and ballot styles** row, each of these values is filled out at the start of the election and does not change over the course of the scanning operation. As ballots from precincts are scanned, the value in the **# Precincts and ballot styles** row increases until at least one ballot from each of the precincts is scanned.

2.6.2 Ballot Scanning Operations section

The Ballot Scanning Operations section of the [Dashboard](#) provides details about the scanning operation and access to the ballots scanned for an election. Data and links include the following.

- **Scan date**—Date on which scanning occurred or started. Value is a time stamp (yyyy-mm-dd).
- **Tabulation date**—Date on which tabulation occurred or started. Value is a time stamp (yyyy-mm-dd).
- **Tabulation software version**—Version of BallotTabulator.exe. Value is a time stamp (Build yyyy-mm-dd hh-mm-ss).

- **# Scanners**—Number of scanners used for the election. Value links to the [ScanStation](#) report.
- **# Boxes scanned**—Number of boxes of ballots scanned for the election. Value links to the [Box](#) report.
- **# Ballots automatically tabulated**—Number of ballot cards scanned for the election without need for manual resolution; unreadable cards are not included. Links to the [Ballot Images](#) report.
- **# Pages judged to be non-ballots**—Number of non-ballot cards scanned for the election. This count includes target cards, and, stray or extraneous pages included in any bundle of ballots. Links to the [Ballot Images](#) report.
- **# Unreadable ballots (*n*% rate)**—Number and overall percentage of ballots that require review because the system cannot read them for reasons such as stains, tears, folded corners, and scanner misfeeds. Links to the [Ballot Images](#) report.
- **# Pages scanned (ballots and non-ballots)**—Total number of pages scanned. Links to the [Ballot Images](#) report.

2.6.3 Visual Resolution of Unreadable Ballots section

The Visual Resolution of Unreadable Ballots section of the [Dashboard](#) provides details of the ballots that ClearCount is initially unable to tabulate. Information includes current resolution status data.



See [Resolving ballot issues](#) for more information about how to process unreadable ballots.

Items in the Visual Resolution of Unreadable Ballots section include:

- **Unreadable ballot images needing resolution**—Number of initially unreadable ballots that remain unresolved. Links to the [Resolving Ballots](#) tool.
- **Ballots resolved & tabulated**—Number of initially unreadable ballots already resolved by election officials. Links to the [Resolving Ballots](#) tool.
- **Unvotable ballots (could be resolved by rescanning *n* boxes)**—*n*, a variable, links to a variant of the [Box](#) report that identifies which boxes contain the unvotable ballots.
 - **Occluded or incomplete image**—Number of ballots that cannot be tabulated without rescanning because of occlusions or incomplete images. Links to the [Ballot Images](#) report.
 - **Scanned images with multiple overlapping ballots**—Number of ballots that cannot be tabulated without rescanning because of multifeeds. Links to the [Ballot Images](#) report.

- **Resolved as a non-ballot**—Number of unreadable items resolved as non-ballots; these are usually target cards. Links to the [Ballot Images](#) report.
- **Unreadable ballots (total)**—Total number of scanned ballots requiring manual resolution. Links to the [Ballot Images](#) report.



In an election where all ballots are properly scanned and automatically analyzed, the Visual Resolution of Unreadable Ballots section contains only zeroes.

2.6.4 Ballot Reconciliation section

The Ballot Reconciliation section of the [Dashboard](#) provides the current state of the election in the ClearCount database, counting which ballots were successfully tabulated and which require additional attention. Each link in this section displays the specific ballot images in question.

Items in the Ballot Reconciliation section include the following.



Certain items appear only when [Audit](#) reports are enabled as noted below.

- **Comparison System**—Available when auditing is enabled.
 - **Total ballots cast (paper & touch screen)**—Total number of ballots cast according to the audit system.
 - **Ballots cast on touch screens**—Number of ballots cast using touch screens according to the audit system.
 - **Ballots cast on paper**—Number of ballots cast on paper according to the audit system, calculated as (*Total ballots cast* minus *Ballots cast on touch screens*).
- **ClearBallot System**
 - **Ballots automatically tabulated**—Number of ballot cards scanned for the election without need for manual resolution; unreadable cards are not included. Links to the [Ballot Images](#) report. Always available.
 - **Initial tabulated ballot discrepancy**—Difference between the number of paper ballots tabulated by the primary voting system and by the audit system, calculated as (*Ballots automatically tabulated* minus *Ballots cast on paper*). Available when auditing is enabled.

- **Visual Resolution & Reconciliation**—Always available.
 - **Unreadable ballots**—Number of scanned ballots identified by ClearCount as unreadable, exclusive of non-ballots and multifeeds. Links to the [Ballot Images](#) report.
 - **Resolved as a non-ballot**—Number of unreadable items resolved through ClearCount as non-ballots; these are usually target cards. Links to the [Ballot Images](#) report.
 - **Estimated additional ballots in multiple overlapping ballots**—Estimated number of ballots resolved through ClearCount as multifeeds (because scanning initially processed multiple ballots as single images).
 - **Adjustment to ballot count from visual resolution**—Net change to the number of ballots counted by ClearCount.
- **Final Total Ballot Count**—Total number of ballots processed by ClearCount. Always available.
- **Total Ballot Discrepancy**—Difference between the number of ballots processed by ClearCount and the audit system, calculated as (*Final Total Ballot Count* minus *Ballots cast on paper*). Available when auditing is enabled.

2.6.5 Ballot Discrepancy Analysis section

The Ballot Discrepancy Analysis section of the [Dashboard](#) provides matchpoint discrepancy data when [audit](#) reports are enabled, including:

- **# Ballot MatchPoint Discrepancies**—Calculated by subtracting the ballot image count reported by ClearCount from the ballot count reported by the primary voting system. Links to the [Ballot MatchPoint Discrepancies](#) report.
- **# Ballot MatchPoints**—Compares the ballot count reported by the primary voting system and the audit system. Links to the [Ballot MatchPoint Discrepancies](#) report.
- **Maximum Ballot MatchPoint Discrepancy**—Calculated by multiplying the number of precincts by the number of voter groups.

2.7 Reports menu

The *Reports for Election_Name* dropdown menu located in the title bar of the [Dashboard](#) provides miscellaneous reports for the active election. Report types include:

- [Election](#)
- [Audit \(comparison\)](#)
- [Other](#)

2.7.1 Election reports

ClearCount provides these election reports plus a link to the [Dashboard](#):

- [Statement of Votes Cast](#)
- [Statement of Ballots Cast](#)
- [Statement of Votes Cast with Precincts](#)
- [Contests Report](#)

2.7.2 Audit (Comparison) Reports

ClearCount provides these comparison reports:

- [Comparison of Votes Cast](#)
- [Comparison of Ballots Cast](#)
- [Comparison of Votes Cast with Precincts](#)
- [Discrepancy Summary Report](#)
- [Ballot MatchPoint Discrepancies](#)
- [Vote MatchPoint Discrepancies](#)
- [Comparison of Ballots Cast with Counter Groups \(Counter Group Discrepancies\)](#)



To be accessible, comparison reports must be [enabled](#).

2.7.3 Other items on the Reports menu

ClearCount provides these miscellaneous items:

- [Election Activity log](#)
- [Human Resolutions \(Ballot Resolver\) tool](#)
- [Causes of Unreadable Ballots report](#)
- [Ballot Locator tool](#)

2.8 Report descriptions

ClearCount reports are described in alphabetical order.



All reports are read-only. All browser users with access to an election can view its reports.

2.8.1 Ballot Images report

The Ballot Images report provides access to all of the ballots in the ClearCount database for the selected election.

Side 1 Image	Side 2 Image	Scan Time	Registration Error(s)	Review Status	Precinct	Ballot Style	BallotID
ED-031+10833.jpg 	ED-031+10834.jpg 	2012-09-07 12:31:32	Side 1: Wrong number of LEFT timing marks (36 at most, expected 41) Side 2: Wrong number of LEFT timing marks (36 at most, expected 41)	Reviewed and tabulated	5203	34	ED-031+10833

Figure 2-6. Ballot Images report

Access

From the [Ballot Scanning Operations](#) section of the Dashboard, click the numeric value of **# Ballots automatically tabulated** or **# Pages scanned (ballots and non-ballots)**.

Data

Data for each ballot includes:

- **Side 1 Image**—Image of the front side of the ballot card.
- **Side 2 Image**—Image of the back side of the ballot card.
- **Scan Time**—Time at which the card was scanned.
- **Unreadable Reason(s)**—Reasons why an unreadable ballot cannot be read. No value for automatically tabulated ballots.
- **Resolution Status**—For unreadable ballot images, the processing status for the corresponding ballot (for example, Resolved and tabulated). Empty if automatically tabulated.
- **Precinct**—Precinct this ballot comes from.

- **Ballot Style**—Ballot style for this ballot.
- **Ballot ID**—Ballot style identifier for the front-side ballot image. Links to the visually-annotated ballot image.



The Ballot Images report can process up to 100,000 images. (This is *not* a restriction on the number of ballots that can be tabulated for an election.) If the message *Warning: Results limited to 100000 ballots* appears, you can filter the records to search a smaller subset of ballots.

2.8.2 Ballot Locator tool

The Ballot Locator tool supports retrieval of ballot IDs by filtering images for the selected election. This capability is useful when ballots are commingled.

General Election, Nov. 6, 2012, Bay County, FL

Ballot Locator

Filter table:

Precinct: Counter Group: Contest: ScanStation:

BallotID	Precinct	BallotStyleID	ImageNumberFromLast
ED-022			
ED-022+10003	10	10	3
ED-022+10005	10	10	2
ED-022+10007	10	4194314	2
ED-022+10009	10	4194314	2
ED-022+10011	10	10	2
ED-022+10013	10	4194314	2
ED-022+10015	10	10	2
ED-022+10017	10	4194314	2
ED-022+10019	10	10	2
ED-022+10021	10	4194314	2

10 entries per page 1 to 10 of 5,657

Figure 2-7. Ballot Locator tool

Access

From the [Other Reports](#) section of the Reports menu, choose **Ballot Locator**.

Data

Data for each ballot listed in the results includes:

- **Ballot ID**—Unique identifier for the ballot.
- **Precinct**—Precinct in which the ballot was voted.
- **Ballot Style ID**—Unique identifier for the ballot style of the ballot.
- **Image Number From Last**—Number of images between the ballot images in the current and preceding rows. (This parameter is equivalent to the **Scan the specified number of pages** setting in ScandALL PRO's **Scan Settings** dialog, whose use is illustrated in Scanning for a specific ballot on page 81.

Filters include: Precinct; Counter Group; Contest; and ScanStation. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.3 Ballot MatchPoint Discrepancies report

The Ballot MatchPoint Discrepancies report is very similar to the [Comparison of Ballots Cast](#) report, except that it includes only voter groups that show a ballot matchpoint discrepancy at the precinct level.

Precinct	Counter Group	Voting System	Audit	Difference	# Boxes
101.FBY	ED	420	0	-420	0
101.FBY	AB	891	0	-891	0
101.FBY	ABED	287	0	-287	0
101.FBY	EV	138	0	-138	0
101.FBY	PR	76	0	-76	0
102.FBC	ED	253	0	-253	0
102.FBC	AB	884	0	-884	0
102.FBC	ABED	189	0	-189	0
102.FBC	EV	93	0	-93	0
102.FBC	PR	24	0	-24	0

Figure 2-8. Ballot MatchPoint Discrepancies report

Access

From the [Audit Reports](#) section of the Reports menu, choose **Ballot MatchPoint Discrepancies**.

Data

Data for each precinct includes:

- **Precinct**—Unique identifier for the precinct.
- **Counter Group**—Identifier for the counter group.
- **Ballots:**
 - **Voting System**—Number of votes tabulated by the primary voting system.
 - **Audit**—Number of votes counted by the audit system. Links to the [Ballot Images](#) report.
 - **Difference**—Discrepancy between the tabulated and audited counts, calculated as (*Audit* minus *Voting System*).

- **# Boxes**—Number of boxes. Links to the [Box](#) report.

Filters include: Precinct; Counter Group; and Contest. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.4 Ballot Styles report

The Ballot Styles report provides the number of ballots and precincts using each ballot style and a link to a sample ballot of each style.

General Election, Nov 6, 2012, El Paso County, CO

Filter table:

Ballot Style	Ballots	# Precincts	Sample Ballot	Blank Ballot PDF File Name
1	260	2	ED-007+10135	01-3690-NP.pdf
2	2,191	11	ED-005+10147	02-1741-NP.pdf
3	40	6	ED-007+10119	03-3633-NP.pdf
4	3,580	13	ED-001+10003	04-3430-NP.pdf
5	1	1	ED-014+10379	05-3648-NP.pdf
6	0	1		06-3424-NP.pdf
7	2,891	16	ED-010+10021	07-1701-NP.pdf
8	542	4	ED-016+10425	08-1740-NP.pdf
9	1,702	11	ED-003+10003	09-1758-NP.pdf
10	1,277	6	ED-004+10019	10-3544-NP.pdf

10 entries per page 1 to 10 of 49

First Previous Next FF Last

Copy CSV Print

Figure 2-9. Ballot Styles report

Access

From the [Election Data](#) section of the Dashboard, click the numeric value of **# Ballot styles**.

Data

Data for each ballot style includes:

- **Ballot Style**—Unique identifier for the ballot style.
- **Ballots**—Number of ballots using the ballot style. Links to the [Ballot Images](#) report.
- **# Precincts**—Number of precincts using the ballot style. Links to the [Precinct and Style](#) report.
- **Sample Ballot**—Example of the ballot style, if available. Links to a visually annotated image of the ballot style.
- **Blank Ballot PDF File Name**—Name of the PDF source file for the ballot style.

2.8.5 Box report

The Box report details the contents of each ballot box.

General Election, Nov 6, 2012, El Paso County, CO

Box Report

Filter table:

Precinct: Counter Group: Contest: ScanStation: Box: BallotStyleID:

BoxID	Ballots	Unreadable	%	Scan Station	Scanner Model	Scanner Serial	Start Scan Time	End Scan Time	Scan Duration	Ballots Per Hour	# Precincts
ED-004	82	0	0.00%	beast			2013-04-03 10:14:53	2013-04-03 10:32:19	0:17:26	282	1
ED-013	184	0	0.00%	beast			2013-04-03 11:16:26	2013-04-03 11:32:12	0:15:46	700	1
ED-027	1	0	0.00%	beast			2013-04-03 12:03:48	2013-04-03 12:21:51	0:18:03	3	1

10 entries per page 1 to 3 of 3

Figure 2-10. Box report

Access

From the [Precinct and Style](#) report, click the numeric value of **# Boxes**.

Data

Data for each box includes:

- **Box ID**—Unique identifier for the box. Links to the [Ballot Images](#) report.
- **Ballots**—Number of ballots in the box. Links to the [Ballot Images](#) report.
- **Unreadable**—Number of unreadable ballots in the box. Links to the [Ballot Images](#) report.
- **(Unreadable) %**—Percentage of unreadable ballots in the box.
- **ScanStation**—Name of the ScanStation at which the box was scanned.
- **Scanner Model**—Model identifier for the configured scanner.
- **Scanner Serial**—Serial number of the configured scanner.
- **Start Scan Time**—Time at which scanning of the box began.
- **End Scan Time**—Time at which scanning of the box ended.
- **Scan Duration**—Length of time taken to scan the box.
- **Ballots per Hour**—Rate at which the ballots in the box were scanned.
- **# Precincts**—Number of precincts with ballots in the box. Links to the [Precinct and Style](#) report for the contest.

Filters include: Precinct; Counter Group; Contest; ScanStation; and Box. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.6 Comparison of Ballots Cast report

The Comparison of Ballots Cast (COBC) report shows the number of ballots per precinct for both the primary voting system and the audit result.

Precinct	Voting System	Audit	Difference	# Boxes
1203	3,603	3,603	0	42
1205	1,162	1,162	0	35
1230	802	802	0	32
1251	91	91	0	17
1255	1,130	1,130	0	30
1257	929	928	-1	21
1259	167	167	0	17
1301	1,235	1,234	-1	25
1302	1,024	1,024	0	32
1303	2,188	2,190	+2	37

Figure 2-11. Comparison of Ballots Cast report

Access

From the [Audit Reports](#) section of the Reports menu, choose **Comparison of Ballots Cast**.

Data

Data for each precinct includes:

- **Precinct**—Unique identifier for the precinct.
- **Ballots:**
 - **Voting System**—Number of votes tabulated by the primary voting system.
 - **Audit**—Number of votes counted by the audit system. Links to the [Ballot Images](#) report.
 - **Difference**—Discrepancy between the tabulated and audited counts, calculated as (*Audit* minus *Voting System*).
- **# Boxes**—Number of boxes. Links to the [Box](#) report.

Filters include: Precinct; Counter Group; and Contest. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.7 Comparison of Ballots Cast with Counter Groups report

The Comparison of Ballots Cast with Counter Groups report shows the number of votes per counter group for both the primary voting system and the audit result.

Counter Group	Ballots		
	Voting System	Audit	Difference
ED	61,188	38,380	-22,808
AB	151,050	0	-151,050
ABED	41,318	0	-41,318
EV	24,401	0	-24,401
PR	8,454	0	-8,454
EVTS	0	0	0

Figure 2-12. Comparison of Ballots Cast with Counter Groups report

Access

From the [Audit Reports](#) section of the Reports menu, choose **Counter Group Discrepancies**.

Data

Data for each counter group includes:

- **Counter group**—Counter group.
- **Ballots:**
 - **Voting System**—Number of votes tabulated by the primary voting system.
 - **Audit**—Number of votes counted by the audit system. Links to the [Ballot Images](#) report.
 - **Difference**—Discrepancy between the tabulated and audited counts, calculated as (*Audit* minus *Voting System*).

Filters include: Precinct; Counter Group; and Contest. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.8 Comparison of Votes Cast report

The Comparison of Votes Cast (COVC) report contrasts the adjudications of the primary voting system and the audit result.

Clear Ballot Reports for fl_leon_2012g christine

General Election, Nov 6, 2012, Leon County, FL

Comparison of Votes Cast

Filter table:

Precinct: All Counter Group: All Contest: All Change

Choice	Ballots with Contest (*)			Votes			Over Votes	Under Votes	Non Votes	Links
	Voting System	Audit	Difference	Voting System	Audit	Difference				
PRESIDENT (Vote for 1)										
Barack Obama	148,527	148,517	-10	90,560	90,558	-2	3	368	57,588	
Mitt Romney	148,527	148,517	-10	55,619	55,619	0	0	368	92,530	
Gary Johnson	148,527	148,517	-10	1,133	1,134	+1	1	368	147,014	
Write-in	148,527	148,517	-10	318	310	-8	0	368	147,839	
Jill Stein	148,527	148,517	-10	232	231	-1	1	368	147,917	
Roseanne Barr	148,527	148,517	-10	102	102	0	1	368	148,046	
Virgil H. Goode, Jr.	148,527	148,517	-10	62	61	-1	0	368	148,088	
Thomas R. Stevens	148,527	148,517	-10	46	46	0	0	368	148,103	
Ross C. Anderson	148,527	148,517	-10	33	32	-1	1	368	148,116	
Tom Hoeffling	148,527	148,517	-10	20	20	0	0	368	148,129	

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Figure 2-13. Comparison of Votes Cast report

Access

From the [Audit Reports](#) section of the Reports menu, choose **Comparison of Votes Cast**.

Data

Data for each choice includes:

- **Choice**—Candidate whose votes are reported.
- **Ballots with Contest:**
 - **Voting System**—Number of votes tabulated by the primary voting system.
 - **Audit**—Number of votes counted by the audit system. Links to the [Ballot Images](#) report.
 - **Difference**—Discrepancy between the tabulated and audited counts, calculated as (*Audit* minus *Voting System*).
- **Votes:**
 - **Voting System**—Number of votes tabulated by the primary voting system.
 - **Audit**—Number of votes counted by the audit system. Links to the [Ballot Images](#) report.
 - **Difference**—Discrepancy between the tabulated and audited counts, calculated as (*Audit* minus *Voting System*).
- **Over Votes**—Overvotes adjudicated through ClearCount.
- **Under Votes**—Undervotes adjudicated through ClearCount.
- **Non Votes**—Non-votes adjudicated through ClearCount.
- **Links**—Provides a dropdown menu for examining the associated contest by precinct or party totals. Choices include:
 - Election District Subtotals
 - Counter Group Subtotals
 - Party Subtotals

Filters include: Precinct; Counter Group; Contest; ScanStation; and Box. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.9 Comparison of Votes Cast With Precincts report

The Comparison of Votes Cast with Precincts report, like the [Comparison of Votes Cast](#) report, contrasts the adjudications of the primary voting system and the audit result, but it does it on a precinct basis. Users can control which precincts and counter groups are displayed.

Clear Ballot Reports for fl_leon_2012g christine

General Election, Nov 6, 2012, Leon County, FL

Comparison of Votes Cast with Precincts

Filter table:

Precinct: Counter Group: Contest:

Choice	Precinct	Ballots with Contest (*)			Votes			Over Votes	Under Votes	Non Votes	# Boxes	Links
		Voting System	Audit	Difference	Voting System	Audit	Difference					
PRESIDENT (Vote for 1)												
Mitt Romney	1203	1,820	1,820	0	316	316	0	0	5	1,499	42	
Mitt Romney	1205	587	587	0	90	90	0	0	2	495	35	
Mitt Romney	1230	408	408	0	141	141	0	0	1	266	32	
Mitt Romney	1251	46	46	0	2	2	0	0	0	44	17	
Mitt Romney	1255	572	572	0	153	153	0	0	4	415	30	
Mitt Romney	1257	470	470	0	275	275	0	0	0	195	21	
Mitt Romney	1259	84	84	0	46	46	0	0	0	38	17	
Mitt Romney	1301	635	634	-1	44	44	0	0	1	589	25	
Mitt Romney	1302	528	528	0	189	189	0	0	0	339	32	
Mitt Romney	1303	1,117	1,118	+1	156	156	0	0	3	959	37	

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Figure 2-14. Comparison of Votes Cast with Precincts report

Access

From the [Audit Reports](#) section of the Reports menu, choose **Comparison of Votes Cast with Precincts**.

Data

Data for each choice includes:

- **Choice**—Candidate whose votes are reported.
- **Precinct**—Unique identifier for the precinct.

- **Ballots with Contest:**

- **Voting System**—Number of votes tabulated by the primary voting system.
- **Audit**—Number of votes counted by the audit system. Links to the [Ballot Images](#) report.
- **Difference**—Discrepancy between the tabulated and audited counts, calculated as (*Audit minus Voting System*).

- **Votes:**

- **Voting System**—Number of votes tabulated by the primary voting system.
- **Audit**—Number of votes counted by the audit system. Links to the [Ballot Images](#) report.
- **Difference**—Discrepancy between the tabulated and audited counts, calculated as (*Audit minus Voting System*).

- **Over Votes**—Overvotes adjudicated through ClearCount.
- **Under Votes**—Undervotes adjudicated through ClearCount.
- **Non Votes**—Non-votes adjudicated through ClearCount.
- **Links**—Provides a link to the Counter Group Subtotals report.

Filters include: Precinct; Counter Group; and Contest. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.10 Contests report

The Contests report provides extensive details, including winners, for each contest in the selected election.



The Contests report is a responsive web page, meaning that the number of columns displayed varies with window size. See below for more information.

Clear Ballot Reports for ny_monroe_2012g Mary

General Election, Nov 6, 2012, Monroe County, NY

Contests Report

Filter table:

Election District: All Counter Group: All Change

Contest	# Boxes	# Ballots	Voted	Blank Voted	Over Voted	Over Voted %	Margin	Margin %	Winner(s)
PRESIDENTIAL ELECTORS FOR PRESIDENT AND VICE PRESIDENT	27	7,713	7,689	20	4	0.05%	1,830	23.80%	Barack Obama ELECTORS FOR PRESIDENT Joe Biden ELECTORS ...
UNITED STATES SENATOR	27	7,713	7,368	343	2	0.03%	2,936	39.85%	Kirsten E Gillibrand
STATE SUPREME COURT JUSTICE 7th Judicial District	27	7,713	7,262	436	15	0.19%	639	4.56%	Gail Donofrio, J Scott Odorisi
REPRESENTATIVE IN CONGRESS 25th District	27	7,713	7,542	169	2	0.03%	1,402	18.59%	Louise M Slaughter
STATE SENATOR 56th District	8	2,361	1,556	805	0	0	1,532	98.46%	Joseph E Robach
MEMBER OF ASSEMBLY 136th District	14	3,851	2,802	1,049	0	0	2,772	98.93%	Joseph D Morelle
COUNTY CLERK	27	7,713	7,223	490	0	0	958	13.26%	Cheryl Dinolfo
CITY COURT JUDGE	7	1,874	1,415	459	0	0	1,399	98.87%	Ellen M Yacknin
STATE SENATOR 55th District	7	2,138	1,989	149	0	0	536	26.95%	Ted O'Brien
COUNTY LEGISLATOR			0	0	0		0		

10 entries per page 1 to 10 of 29 First Previous Next FF Last

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Clear Ballot Reports for ny_monroe_2012g Mary

General Election, Nov 6, 2012, Monroe County, NY

Contests Report

Filter table:

Election District: All Counter Group: All Change

Contest	Vote Rule	# Choices	# Election Districts	# Boxes	# Ballots	Voted	Blank Voted	Over Voted	Over Voted %	Margin	Margin %	Winner(s)
PRESIDENTIAL ELECTORS FOR PRESIDENT AND VICE PRESIDENT	1	7	49	27	7,713	7,689	20	4	0.05%	1,830	23.80%	Barack Obama ELECTORS FOR PRESIDENT Joe Biden ELECTORS ...
UNITED STATES SENATOR	1	6	49	27	7,713	7,368	343	2	0.03%	2,936	39.85%	Kirsten E Gillibrand
STATE SUPREME COURT JUSTICE 7th Judicial District	2	6	49	27	7,713	7,262	436	15	0.19%	639	4.56%	Gail Donofrio, J Scott Odorisi
REPRESENTATIVE IN CONGRESS 25th District	1	3	49	27	7,713	7,542	169	2	0.03%	1,402	18.59%	Louise M Slaughter
STATE SENATOR 56th District	1	2	17	8	2,361	1,556	805	0	0	1,532	98.46%	Joseph E Robach
MEMBER OF ASSEMBLY 136th District	1	2	25	14	3,851	2,802	1,049	0	0	2,772	98.93%	Joseph D Morelle
COUNTY CLERK	1	3	49	27	7,713	7,223	490	0	0	958	13.26%	Cheryl Dinolfo
CITY COURT JUDGE	1	2	12	7	1,874	1,415	459	0	0	1,399	98.87%	Ellen M Yacknin
STATE SENATOR 55th District	1	3	13	7	2,138	1,989	149	0	0	536	26.95%	Ted O'Brien
COUNTY LEGISLATOR	1	3				0	0	0		0		

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Figure 2-15. Contests report ("small" and "large" formats)

Access

Do one of the following:

- From the [Election Reports](#) section of the Reports menu, choose **Contests Report**.
- From the [Election Data](#) section of the Dashboard, click the numeric value of **# Contests**.

Data

The Contests report page displays 10 columns on a laptop screen (900 pixels or less), up to 13 on a large monitor. When archived to a CSV file or printed, all 13 columns are captured.

Data for each contest includes:

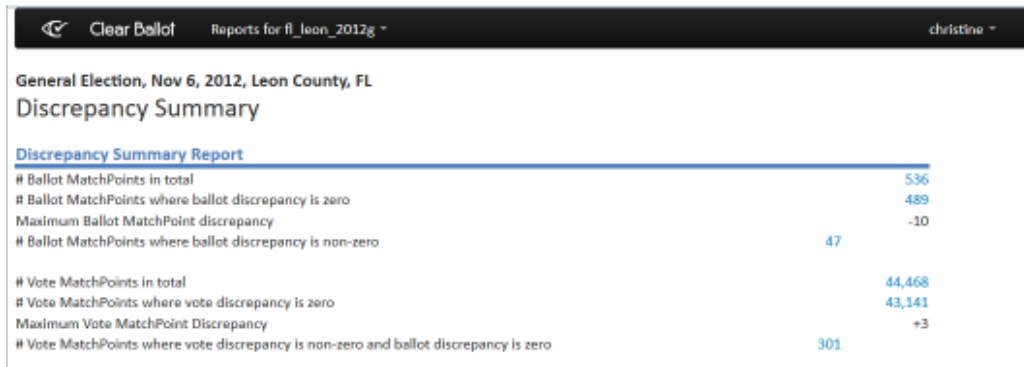
- **Contest**—Description of the contest. Links to the [Statement of Votes Cast](#) report. Always visible.
- **Vote Rule**—Number of choices each voter can make for contest.
- **# Choices**—Number of candidates or options. Links to the [Statement of Votes Cast](#) report.
- **# Precincts**—Number of precincts involved in the contest.
- **# Boxes**—Number of boxes involved in the contest. Links to the [Box](#) report. Always visible.
- **# Ballots**—Number of ballots involved in the contest. Links to the [Ballot Images](#) report. Always visible.
- **Voted**—Number of times the contest was voted. Links to the [Ballot Images](#) report. Always visible.
- **Blank Voted**—Number of times voters skipped the contest. Links to the [Ballot Images](#) report. Always visible.
- **Over Voted**—Number of times the contest was overvoted (that is, a voter exceeded the voting rule for the contest). Links to the [Ballot Images](#) report. Always visible.
- **Over Voted %**—Percentage of times the contest was overvoted. Always visible.
- **Margin**—Number of votes needed to alter the outcome of the election, calculated as the difference between the lowest vote-getting winner and highest vote-getting loser. Always visible.
- **Margin %**—Margin percentage. Always visible.
- **Winner(s)**—Name(s) or position of contest winners. Always visible.

Filters include: Precinct and Counter Group. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.11 Discrepancy Summary report

The Discrepancy Summary report provides the percentages of ballot and vote agreement, and the election's matchpoint breakdown. Matchpoints are identically defined, independently computed points of comparison between the primary voting system and the audit system. A:

- Ballot matchpoint—Compares the number of ballots cast to the number of ballot images scanned for a counter group of a precinct.
- Vote matchpoint—Computes the number of votes cast for a candidate on ballots for a counter group of a precinct.



General Election, Nov 6, 2012, Leon County, FL	
Discrepancy Summary	
Discrepancy Summary Report	
# Ballot MatchPoints in total	536
# Ballot MatchPoints where ballot discrepancy is zero	489
Maximum Ballot MatchPoint discrepancy	-10
# Ballot MatchPoints where ballot discrepancy is non-zero	47
# Vote MatchPoints in total	44,468
# Vote MatchPoints where vote discrepancy is zero	43,141
Maximum Vote MatchPoint Discrepancy	+3
# Vote MatchPoints where vote discrepancy is non-zero and ballot discrepancy is zero	301

Figure 2-16. Discrepancy Summary report

Access

From the [Audit Reports](#) section of the Reports menu, choose **Discrepancy Summary Report**.

Data

Data includes:

- # Ballot MatchPoints in total
- # Ballot MatchPoints where ballot discrepancy is zero
- Maximum Ballot MatchPoint discrepancy
- # Ballot MatchPoints where ballot discrepancy is non-zero
- # Vote MatchPoints in total
- # Vote MatchPoints where vote discrepancy is zero
- Maximum Vote MatchPoint discrepancy
- # Vote MatchPoints where vote discrepancy is non-zero and ballot discrepancy is zero

2.8.12 Distinct Causes of Unreadable Ballots report

The Distinct Causes of Unreadable Ballots report provides summary statistics on why the system could not interpret certain ballots.

Coordinated Mail Ballot Election, Nov 5, 2013, El Paso County, CO

Distinct Causes of Unreadable Ballots

Filter table:

Unreadable Reason	# Ballots	# Resolved
Image height (...) is not a normal ballot - scanner probably pulled in more than one page (MULTI-GRAB)	8	8
Image is badly truncated (...)	14	14
Invalid Side1 checksum (...)	11	11
Mis-read of Side2 Constant in code channel (...)	1	1
Mis-read of Side2 Mode in code channel (...)	4	4
No timing marks found; probable non-ballot	832	0
Timing marks found on one side, but not on the other side	2	2
Wrong number of LEFT timing marks (...)	7	7
Wrong number of RIGHT timing marks (...)	17	17
Wrong number of TOP timing marks (...)	2	2

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Figure 2-17. Distinct Causes of Unreadable Ballots report

Access

From the [Other Reports](#) section of the Reports menu, choose **Causes of Unreadable Ballots**.

Data

Data for each error includes:

- **Unreadable reason**—Description of the error.
- **# Ballots**—Number of ballots involved in the error.
- **# Resolved**—Number of ballots involved in the error that are already remade.

2.8.13 Precinct and Style report

The Precinct and Style report lists the election districts (as precincts), the number of ballots scanned for each one, and the corresponding ClearCount box IDs. Having this information can simplify the task of identifying scanned ballots for a specific precinct.

General Election, Nov 6, 2012, El Paso County, CO

Precinct Report

Filter table:

Ballot Style: Box: Counter Group: Contest: ScanStation:

Precinct	BallotStyleID	Ballots	# Boxes
101.FBY	27	0	0
102.FBC	27	0	0
103.FBY	27	226	2
104.FBY	27	267	3
105.FBC	27	224	3
106.FBY	27	294	2
107.FBY	26	158	2
108.FBY	26	170	3
109.FBC	26	0	0
110.FBP	26	53	1

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Figure 2-18. Precinct and Style report

Access

From the [Election Data](#) section of the Dashboard, click the numeric value of **# Precincts and ballot styles**.

Data

Data for each precinct and style combination includes:

- **Precinct**—Identifier for the precinct. Links to the [Ballot Images](#) report.
- **Ballot style ID**—Unique identifier for the ballot style.
- **Ballots**—Number of ballots voted. Links to the [Ballot Images](#) report.
- **# Boxes**—Number of boxes containing the ballots. Links to the [Box](#) report.

Filters include: Ballot Style; Box; Counter Group; Contest; and ScanStation. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to search incrementally for alphanumeric strings.

Notes

In the **Election Data** section, the value of **# Precincts and ballot styles** row increases with the first ballot scanned from a precinct. This number does not indicate that *every* ballot from the precinct was successfully scanned and analyzed. However, it is very useful for identifying the overall progress of the scanning operation. Similarly, the Precinct and Style report helps you figure out which precincts remain to be scanned.

If the scanning process for a precinct's ballots has not started, no entry for that precinct appears in the Precinct and Style report.

2.8.14 ScanStation report

The ScanStation report provides information on each scanner used in an election, the number of ballots processed by that scanner, duration of the scanner session, and the effective scanning rate.

Coordinated Mail Ballot Election, Nov 5, 2013, El Paso County, CO

ScanStation Report

Filter table:

Scan Station	Boxes	Ballots	Unreadable	%	Scanner Model	Scanner Serial	Start Scan Time	End Scan Time	Scan Duration	Ballots Per Hour
CBG	1	197	0	0.00%			2013-11-12 17:23:11	2013-11-12 17:26:12	0:03:01	3,918
ScanStation01	117	21,082	14	0.07%	FUJITSU fi-6800dj #2	009091	2013-11-13 16:04:59	2013-11-15 16:34:02	2 days, 0:29:03	435
SCANSTATION02	142	25,554	8	0.03%	FUJITSU fi-6670dj #3	501165	2013-11-12 14:14:31	2013-11-15 15:53:06	3 days, 1:38:35	347
ScanStation03	145	27,016	7	0.03%	FUJITSU fi-6800dj	001242	2013-11-13 08:15:58	2013-11-15 13:36:26	2 days, 5:20:28	506
ScanStation04	190	34,883	21	0.06%	FUJITSU fi-6670dj #2	501165	2013-11-12 14:39:18	2013-11-15 16:23:44	3 days, 1:44:26	473
ScanStation05	9	1,666	0	0.00%	FUJITSU fi-6670dj #2	501799	2013-11-15 15:22:24	2013-11-15 16:35:57	1:13:33	1,359
ScanStation08	37	7,158	1	0.01%	FUJITSU fi-6800dj	000330	2013-11-15 08:45:22	2013-11-15 15:54:06	7:08:44	1,002
ScanStation09	190	33,855	9	0.03%	FUJITSU fi-6800dj	100295	2013-11-13 08:51:39	2013-11-15 15:52:37	2 days, 7:00:58	615

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Figure 2-19. ScanStation report

Access

From the [Ballot Scanning Operations](#) section of the Dashboard, click the numeric value in the **# Scanners** row.

Data

Data for each ScanStation includes:

- **ScanStation**—Identifier for the ScanStation.
- **Boxes**—Number of boxes scanned. Links to the [Box](#) report.
- **Ballots**—Number of ballots scanned.
- **Unreadable**—Number of ballots scanned that were found to be unreadable.
- **% (Unreadable)**—Percentage of the ballots scanned that were found to be unreadable.
- **Scanner Model**—Fujitsu model identifier for the scanner.
- **Scanner Serial**—Serial number of the scanner.
- **Start Scan Time**—Time at which scanning of the boxes began.
- **End Scan Time**—Time at which scanning of the boxes ended.
- **Scan Duration**—Length of time taken to scan the boxes.
- **Ballots per Hour**—Rate at which the ballots in the boxes were scanned.

2.8.15 Statement of Ballots Cast report

The Statement of Ballots Cast (SOBC) report provides a summary of ballots received for each precinct.

Coordinated Mail Ballot Election, Nov 5, 2013, El Paso County, CO

Statement of Ballots Cast with Precincts

Filter table:

Precinct: Counter Group: Contest: ScanStation: Box:

Precinct	Ballots	# Boxes
101.FBY	951	360
102.FBC	930	365
103.FBY	1,007	371
104.FBY	931	322
105.FBC	1,169	412
106.FBY	917	369
107.FBY	481	278
108.FBY	657	307
109.FBC	119	83
110.FBP	899	400

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Figure 2-20. Statement of Ballots Cast report

Access

From the [Election Reports](#) section of the Reports menu, choose **Statement of Ballots Cast**.

Data

Data for each precinct includes:

- **Precinct**—Unique identifier for the precinct.
- **Ballots**—Number of ballots. Links to the [Ballot Images](#) report.
- **# Boxes**—Number of boxes. Links to the [Box](#) report.

Filters include: Precinct; Counter Group; Contest; ScanStation; and Box. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to search incrementally for alphanumeric strings.

2.8.16 Statement of Ballots Cast with Counter Groups report

The Statement of Ballots Cast with Counter Groups report provides the number of ballots for each counter group.

Clear Ballot Reports for ny_anycounty_2012g Mary

AnyCounty Election, Nov 4 2012, Board of Elections, NY

Statement of Ballots Cast with Counter Groups

Filter table:

Election District: Counter Group: Contest: ScanStation: Box:

Counter Group	Ballots
ED	7,759

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Figure 2-21. Statement of Ballots Cast with Counter Groups report

Access

From the [Election Data](#) section of the Dashboard, click the numeric value of **# Counter Groups**.

Data

Data for each counter group includes:

- **Counter Group**—Identifier for the counter group.
- **Ballots**—Number of ballots. Links to the [Ballot Images](#) report.

Filters include: Precinct; Counter Group; Contest; ScanStation; and Box. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to search incrementally for alphanumeric strings.

2.8.17 Statement of Votes Cast report

The Statement of Votes Cast (SOVC) report summarizes the adjudication state of an election. Each ballot is classified as one of the following:

- A *vote* for the candidate.
- An *overvote* that includes the candidate.



In the case of cross-endorsed candidates where state law makes provisions for overvotes involving a single candidate, the vote is adjudicated in the manner prescribed by the state.

- An *undervote*, where the choice's vote target was empty and the number of votes is less than the voting rule.
- A *non-vote*, where the ballot was awarded a vote for another candidate.

These statistics comprise the *ClearCount Election Identity*: The count of ballots cast must equal the counts of votes, overvotes, undervotes, and non-votes for each choice. SOVC also provides the number of participating ballots, and supports examining contests by precinct or party totals.

Coordinated Mail Ballot Election, Nov 5, 2013, El Paso County, CO

Statement of Votes Cast

Filter table:

Precinct: All Counter Group: All Contest: All ScanStation: All Box: All

Choice	Ballots with Contest (*)	Votes	Over Votes	Under Votes	Non Votes	Links
Colorado Springs SD 11 Director Vote for Three						
LuAnn Long	55,966	20,641	161	26,342	8,822	
Jim Mason	55,966	18,099	146	27,861	9,860	
Linda Mojer	55,966	16,218	160	27,692	11,896	
Charlie Bobbitt	55,966	14,714	123	27,129	14,000	
Al Loma	55,966	13,871	129	25,611	16,355	
James Tucker	55,966	13,459	131	27,806	14,570	
Academy SD 20 Director Vote for Three						
Catherine Bullock	29,378	12,031	69	13,552	3,726	
Linda Van Matre	29,378	11,661	66	13,950	3,701	
Larry Norman Borland	29,378	11,589	55	13,917	3,817	
Andrea Van Nort	29,378	9,316	61	14,032	5,969	

10 entries per page 1 to 10 of 103

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Figure 2-22. Statement of Votes Cast report

Access

From the [Election Reports](#) section of the Reports menu, choose **Statement of Votes Cast**.

Data

Data for each choice includes:

- **Choice**—Candidate whose votes are reported.
- **Ballots with Contest**—Number of paper ballots scanned. If a ballot consists of more than one card, this is the number of cards. Includes automatically voted ballots, manually examined and voted ballots, and ballots not yet voted. Links to the [Ballot Images](#) report.
- **Votes**—Number of vote records for the choice. Links to the Votes section of the Vote Visualization for the choice.
- **Over Votes**—Number of ballots where the choice participated in an illegal number of votes and was, therefore, not awarded a vote. Links to the Over Votes section of the Vote Visualization for the choice.
- **Under Votes**—Number of ballots where the choice's vote target was empty and the number of votes tabulated for all choices in that contest was fewer than allowed by the voting rule. Links to the Under Votes section of the Vote Visualization for the choice.
- **Non Votes**—Number of ballots where the choice's vote target is empty but another choice's vote target did receive a valid vote. Links to the Non Votes section of the Vote Visualization for the choice.
- **Links:**
 - **Precinct Subtotals**—Links to the Statement of Votes Cast by Precinct report.
 - **Counter Group Subtotals**—Links to the Statement of Votes Cast by Counter Group report.
 - **Party Subtotals**—Links to the Statement of Votes Cast by Party report.

Filters include: Precinct; Counter Group; Contest; ScanStation; and Box. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.18 Statement of Votes Cast with Counter Groups report

The Statement of Votes Cast with Counter Groups report provides election subtotals by counter group.

AnyCounty Election, Nov 4 2012, Board of Elections, NY

Statement of Votes Cast with Counter Groups

Filter table:

Election District: Counter Group: Contest: ScanStation: Box:

Choice	Counter Group	Ballots with Contest (*)	Votes	Over Votes	Under Votes	Non Votes
PRESIDENTIAL ELECTORS FOR PRESIDENT AND VICE PRESIDENT (Vote for 1)						
Barack Obama ELECTORS FOR PRESIDENT Joe Biden ELECTORS ...	ED	396	282	0	0	114

10 entries per page 1 to 1 of 1

Figure 2-23. Statement of Votes Cast with Counter Groups report

Access

From the **Links** context menu of the [Statement of Votes Cast](#) report, choose **Counter Group Subtotals**.

Data

Data for each choice includes:

- **Choice**—Candidate whose votes are reported.
- **Counter Group**—Identifier for the counter group.
- **Ballots with Contest**—Number of paper ballots scanned. If a ballot consists of more than one card, this is the number of cards. Includes automatically voted ballots, manually examined and voted ballots, and ballots not yet voted. Links to the [Ballot Images](#) report.
- **Votes**—Number of vote records for the choice. Links to the Votes section of the Vote Visualization for the choice.
- **Over Votes**—Number of ballots where the choice participated in an illegal number of votes and was, therefore, not awarded a vote. Links to the Over Votes section of the Vote Visualization for the choice.

- **Under Votes**—Number of ballots where the choice’s vote target was empty and the number of votes tabulated for all choices in that contest was fewer than allowed by the voting rule. Links to the Under Votes section of the Vote Visualization for the choice.
- **Non Votes**—Number of ballots where the choice’s vote target is empty but another choice’s vote target did receive a valid vote. Links to the Non Votes section of the Vote Visualization for the choice.

Filters include: Precinct; Counter Group; Contest; ScanStation; and Box. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to search incrementally for alphanumeric strings.

2.8.19 Statement of Votes Cast with Parties report

The Statement of Votes Cast with Parties report provides election subtotals by party.

Figure 2-24. Statement of Votes Cast with Parties report

Access

From the **Links** context menu of the [Statement of Votes Cast](#) report, choose **Party Subtotals**.

Data

Data for each choice includes:

- **Choice**—Candidate whose votes are reported.
- **Party**—Political party of the choice.
- **Votes**—Number of vote records for the choice. Links to the Votes section of the Vote Visualization for the choice.

Filters include: Precinct; Counter Group; Contest; ScanStation; and Box. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to search incrementally for alphanumeric strings.

2.8.20 Statement of Votes Cast with Precincts report

The Statement of Votes Cast with Precincts report provides election subtotals by precinct.

Coordinated Mail Ballot Election, Nov 5, 2013, El Paso County, CO

Statement of Votes Cast with Precincts

Filter table:

Precinct: Counter Group: Contest: ScanStation: Box:

Choice	Precinct	Ballots with Contest (*)	Votes	Over Votes	Under Votes	Non Votes	# Boxes	Links
Colorado Springs SD 11 Director Vote for Three (Vote for 3)								
Al Loma	101.FBY	951	249	2	423	277	360	
Al Loma	102.FBC	930	174	1	449	306	365	
Al Loma	103.FBY	1,007	245	3	481	278	371	
Al Loma	104.FBY	931	207	2	447	275	322	
Al Loma	105.FBC	1,169	255	2	566	346	412	
Al Loma	106.FBY	917	250	0	423	244	369	
Al Loma	107.FBY	481	114	1	228	138	278	
Al Loma	108.FBY	657	146	0	286	225	307	
Al Loma	109.FBC	119	29	0	46	44	83	
Al Loma	110.FBP	899	161	1	462	275	400	

10 entries per page 1 to 10 of 2,040

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Figure 2-25. Statement of Votes Cast with Precincts report

Access

From the [Election Reports](#) section of the Reports menu, choose **Statement of Votes Cast with Precincts**.

From the **Links** context menu of the [Statement of Votes Cast](#) report, choose **Precinct Subtotals**.

Data

Data for each choice includes:

- **Choice**—Candidate whose votes are reported.
- **Precinct**—Unique identifier for the precinct.
- **Ballots with Contest**—Number of paper ballots scanned. If a ballot consists of more than one card, this is the number of cards. Includes automatically voted ballots, manually examined and voted ballots, and ballots not yet voted. Links to the [Ballot Images](#) report.
- **Votes**—Number of vote records for the choice. Links to the Votes section of the Vote Visualization for the choice.
- **Over Votes**—Number of ballots where the choice participated in an illegal number of votes and was, therefore, not awarded a vote. Links to the Over Votes section of the Vote Visualization for the choice.
- **Under Votes**—Number of ballots where the choice's vote target was empty and the number of votes tabulated for all choices in that contest was fewer than allowed by the voting rule. Links to the Under Votes section of the Vote Visualization for the choice.
- **Non Votes**—Number of ballots where the choice's vote target is empty but another choice's vote target did receive a valid vote. Links to the Non Votes section of the Vote Visualization for the choice.
- **# Boxes**—Number of boxes. Links to the Box report.
- **Links**—Links to the Counter Group Subtotals report.

Filters include: Precinct; Counter Group; Contest; ScanStation; and Box. ClearCount obtains the selectable values from the database. Click **Change** to refilter data. Use **Filter table:** with or without the filter fields to perform incremental searches for alphanumeric strings.

2.8.21 Vote MatchPoint Discrepancies report

The Vote MatchPoint Discrepancy report provides a detailed breakdown of each choice for which there are discrepancies between the results of the primary voting system and the audit result.

Choice	Precinct	Counter Group	Voting System	Audit	Difference	Over Votes	Under Votes	Non Votes	# Boxes
Council Mbr- At-Lg CITY OF AURORA Dist (Vote for 2)									
Barbara Cleland	6264003255	AB	49	0	-49	0	0	0	0
Barbara Cleland	6264003258	AB	10	0	-10	0	0	0	0
Barbara Cleland	6264003453	AB	78	0	-78	0	0	0	0
Barbara Cleland	6264003455	AB	29	0	-29	0	0	0	0
Barbara Cleland	6264103411	AB	46	0	-46	0	0	0	0
Barbara Cleland	6264103413	AB	61	0	-61	0	0	0	0
Barbara Cleland	6264103414	AB	84	0	-84	0	0	0	0
Barbara Cleland	6264103416	AB	175	0	-175	0	0	0	0
Barbara Cleland	6264103417	AB	94	0	-94	0	0	0	0
Barbara Cleland	6264103418	AB	113	0	-113	0	0	0	0

Figure 2-26. Vote MatchPoint Discrepancies report

Access

From the [Audit Reports](#) section of the Reports menu, choose **Vote MatchPoint Discrepancies**.

Data

Data for each choice includes:

- **Choice**—Candidate whose votes are reported.
- **Precinct**—Unique identifier for the precinct.
- **Counter Group**—Unique identifier for the counter group.

- **Votes:**

- **Voting System**—Number of votes tabulated by the primary voting system.
- **Audit**—Number of votes counted by the audit system. Links to the [Ballot Images](#) report.
- **Difference**—Discrepancy between the tabulated and audited counts, calculated as (*Audit* minus *Voting System*).
- **Over Votes**—Overvotes adjudicated through ClearCount.
- **Under Votes**—Undervotes adjudicated through ClearCount.
- **Non Votes**—Non-votes adjudicated through ClearCount.
- **# Boxes**—Number of boxes. Links to the [Box](#) report.

Notes

The report categorizes the:

- Ballots the primary voting system and ClearCount received for a particular precinct and voter group that includes the choice.
- Votes the primary voting system and ClearCount recorded.

Chapter 3. Resolving ballot issues

Election officials can use ClearCount to identify, analyze, and resolve ballot issues. This process is referred to as *digital adjudication*.



Ballot resolution capabilities are available only to users whose access level is [modify](#) or above.

3.1 About resolving ballots

Ballot images may be unreadable for a number of reasons. ClearCount *digitally outstacks* such ballot images for human resolution. Potential resolutions include determining that the image:

- Can be read by a human.
- Is not a ballot.
- Is not votable, based on local statutes for votability. (Physical ballots may be stained, torn, or stuck together, or a ballot image may be twisted or occluded by the scanning process.)
- Actually consists of more than one ballot.

To resolve and process unreadable ballot images, from the [Visual Resolution of Unreadable Ballots](#) section of the Dashboard, click the numeric value of **Unreadable Ballot Images Needing Resolution**. This opens the **Resolving Ballots** tool for accessing both already resolved and not-yet-resolved ballots.

3.2 Resolving Ballots (Ballot Resolver) tool

The Resolving Ballots tool summarizes the unresolved ballots for the selected election and the human resolutions recorded so far.

If your ClearCount access level is:

- read or lower—You cannot resolve ballot issues.
- modify or above—You can resolve ballot issues.

General Election, Nov. 2, 2010, Bay County, FL

Resolving Ballots

Filter table:

Unresolved Ballots

BallotID	Resolution Status	Unreadable Reason(s)
AB-13+10005	Not yet resolved	Ballot too twisted (9 pixels) to accurately locate ovals, due to lack of timing marks on all sides
AB-13+10013	Not yet resolved	Ballot too twisted (-9 pixels) to accurately locate ovals, due to lack of timing marks on all sides
AB-13+10021	Not yet resolved	Ballot too twisted (9 pixels) to accurately locate ovals, due to lack of timing marks on all sides
AB-13+10027	Not yet resolved	Ballot too twisted (11 pixels) to accurately locate ovals, due to lack of timing marks on all sides
AB-13+10029	Not yet resolved	Ballot too twisted (9 pixels) to accurately locate ovals, due to lack of timing marks on all sides

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Resolved Ballots

Filter table:

BallotID	Resolution Status	Resolver	Resolution Date
GE-24+10377	Resolved and tabulated	Larry Moore	2012-05-08 23:33:04
GE-24+10369	Resolved and tabulated	Larry Moore	2012-05-08 23:31:05
GE-24+10367	Resolved and tabulated	Larry Moore	2012-05-08 23:28:57
EV-50+10361	Resolved and tabulated	Larry Moore	2012-04-23 21:56:37
GE-7+10923	Resolved as occluded (cannot be voted)	Larry Moore	2012-04-23 21:51:31

5 entries per page 1 to 5 of 53

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Figure 3-1. Resolving Ballots (Ballot Resolver) tool



Clicking any value in the BallotID column displays the corresponding ballot image file.

Access

From the [Other Reports](#) section of the Reports menu, choose **Human Resolutions**.

Data

Data for each ballot includes:

- **For Unresolved Ballots:**

- **Ballot ID**—Unique identifier for the ballot. Links to the [Ballot Images](#) report.
- **Resolution Status**—Indicates that the ballot is unresolved.
- **Unreadable Reason(s)**—Describes why ClearCount was unable to tabulate the ballot automatically.

- **For Resolved Ballots:**

- **Ballot ID**—Unique identifier for the ballot. Links to the [Ballot Images](#) report.
- **Resolution Status**—Indicates that the ballot is resolved.
- **Resolver**—Name of the ClearCount user who resolved the ballot.
- **Resolution Date**—Time at which the ballot was voted.

3.3 Examining and processing unreadable ballots

ClearCount includes a tool for reviewing and processing unreadable ballots. The tool consists of the ballot image (on the left) and Ballot Configuration editor (on the right).

The screenshot displays the Ballot Configuration editor interface. On the left is a preview of a ballot for Precinct 11, titled "OFFICIAL GENERAL ELECTION BALLOT BAY COUNTY, FLORIDA NOVEMBER 2, 2010". The ballot includes instructions for voters and lists candidates for various offices: Chief Financial Officer, Commissioner of Agriculture, State Representative District 6, and County Commissioners District 4. On the right is the "Ballot Configuration" panel, which allows users to view the front side of the ballot, select a precinct (currently 11 (13)), and set the ballot status (Votable, Not a Ballot, Not Votable, or Multiple). The status is currently set to "Votable". Buttons for "Clear All", "Vote Ballot", and "Save" are at the bottom of the configuration panel.

Figure 3-2. Ballot Image/Ballot Configuration Editor

To resolve an unreadable ballot:

1. (If necessary) Indicate the front side of the ballot.
2. (If necessary) [Orient the ballot image\(s\).](#)
3. [Select the precinct ID of the ballot.](#)
4. Select one of the following ballot statuses: [Votable](#); [Not a ballot](#); [Not votable](#); or [Multiple ballots](#).



The **Clear All** button resets the uncommitted values within the Ballot Configuration editor prior to clicking **Vote Ballot**.

3.4 Orienting the ballot image

To reorient a ballot image:

1. In the **Ballot Configuration** editor, use the arrow buttons as needed to turn the images right-side up.
2. Select the **Front Side** image.

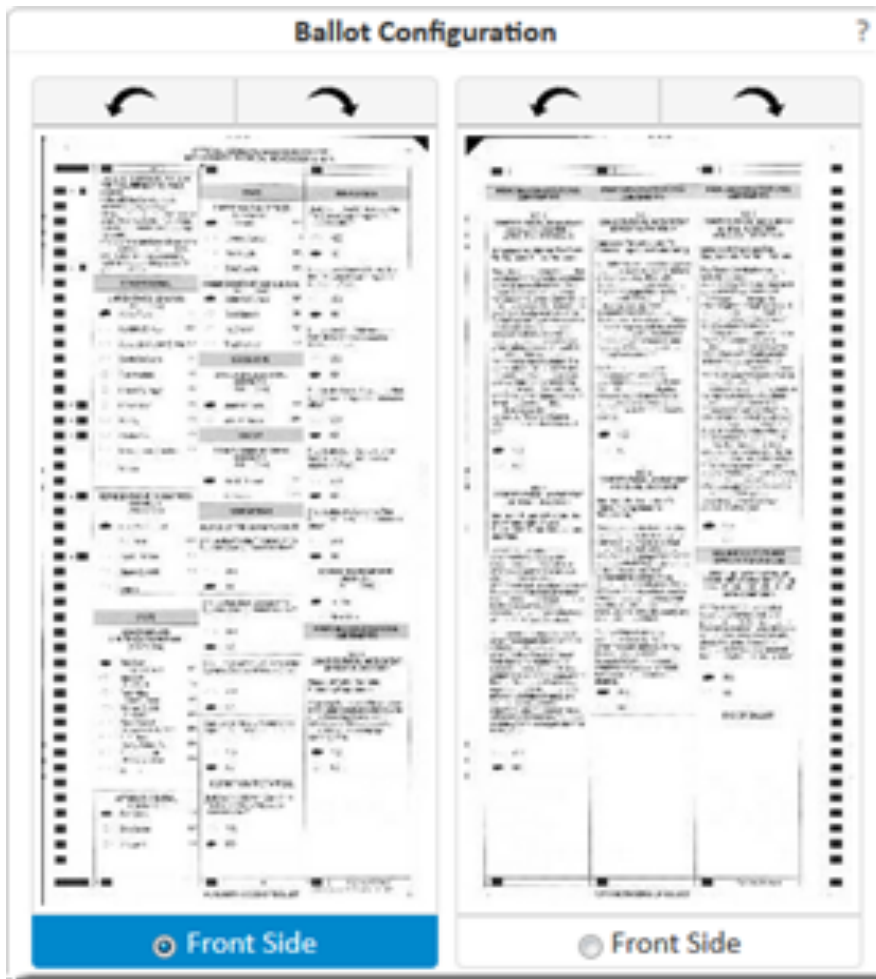


Figure 3-3. Image orientation in the Ballot Configuration editor

3.5 Selecting the ballot precinct ID

To select the ballot's precinct ID:

1. Determine the precinct ID.



The method for determining the precinct ID is jurisdiction-specific. For example, in some jurisdictions the precinct ID is printed on the ballot.

2. In the **Ballot Configuration** editor, click **Select Precinct**.

The **Select Precinct** dropdown list appears

3. Select the precinct ID.

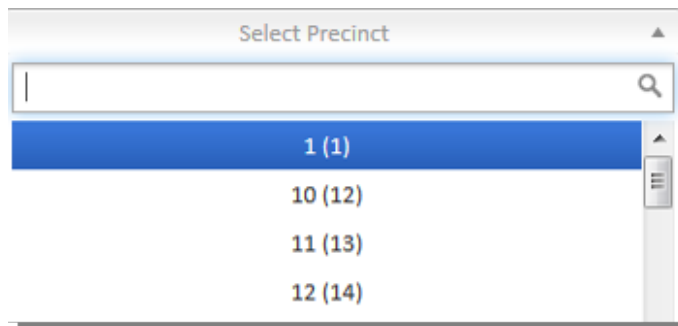


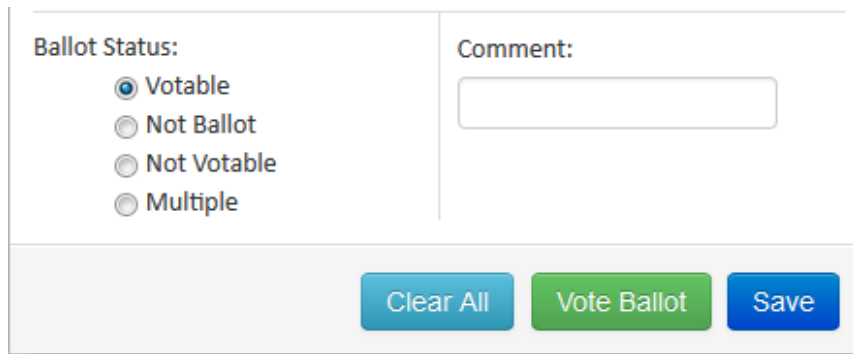
Figure 3-4. Select Precinct dropdown list

3.6 Processing a votable image

If election officials determine that the ballot image is votable, they can resolve the ballot in the **Ballot Configuration** editor.

To process a votable image in the **Ballot Configuration** editor:

1. In **Ballot Status**, select **Votable**.

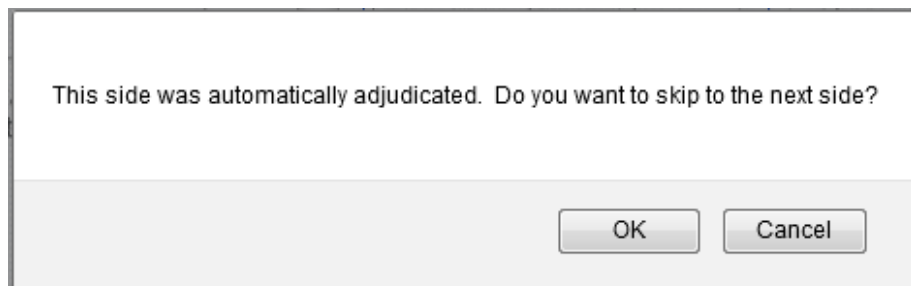


The screenshot shows a window titled 'Ballot Configuration'. On the left, under 'Ballot Status:', there are four radio buttons: 'Votable' (selected), 'Not Ballot', 'Not Votable', and 'Multiple'. To the right is a 'Comment:' field with a text input box. At the bottom right are three buttons: 'Clear All' (light blue), 'Vote Ballot' (green), and 'Save' (blue).

Figure 3-5. Votable ballot status setting

2. Click **Vote Ballot**.

If this ballot image was already adjudicated by the system (because it was not unreadable), the following dialog appears.

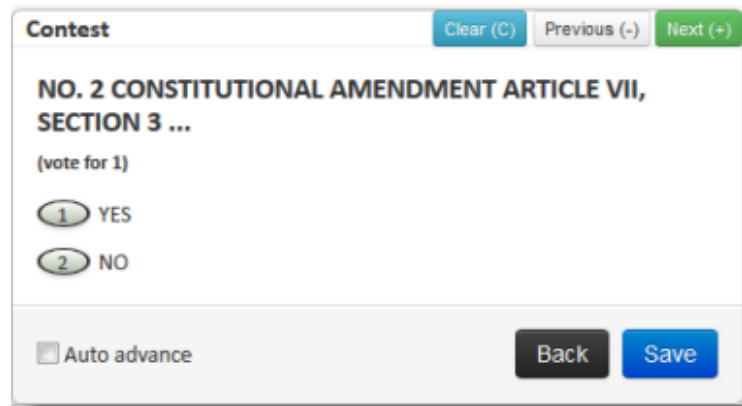


The screenshot shows a dialog box with the text: 'This side was automatically adjudicated. Do you want to skip to the next side?'. At the bottom right are two buttons: 'OK' and 'Cancel'.

Figure 3-6. Adjudication dialog

3. Click **OK** to move on to the ballot image for the other side of the ballot.

The **Ballot Contests** editor appears, populated with the choices for the first contest on the ballot. In the ballot image itself, the contest sidebar is highlighted in green to make it easy to identify.



The screenshot shows a software window titled "Contest". At the top right of the window are three buttons: "Clear (C)" in blue, "Previous (-)" in grey, and "Next (+)" in green. The main content area displays the text "NO. 2 CONSTITUTIONAL AMENDMENT ARTICLE VII, SECTION 3 ..." in bold. Below this, it says "(vote for 1)". There are two radio button options: "1 YES" and "2 NO", both with the numbers inside green circles. At the bottom left is a checkbox labeled "Auto advance". At the bottom right are two buttons: "Back" in black and "Save" in blue.

Figure 3-7. Ballot Contests editor

4. Using the ballot as a guide, recreate the voter's choice(s). You can vote the contest in two ways: using the mouse or using the number keys on the keyboard.

- With the mouse, you can:
 - Click the contest oval once, and then click **Next** (or the **+** key) to move to the next contest.

This method can be used when more than one vote is allowed in the contest. If more than one vote is allowed for a contest but the voter did not completely vote it, you must click **Next** or **+** to proceed.

- Check **Auto advance**, so that after double-clicking to vote the contest oval, the system moves directly to the next contest, as long as the voting rule for this contest was met.

If you overvoted the contest by accident, the overvoted selections appear in red. Click the vote(s) made in error once to deselect them. When the contest is voted correctly, click **Next**. Auto advance is disabled in such cases.

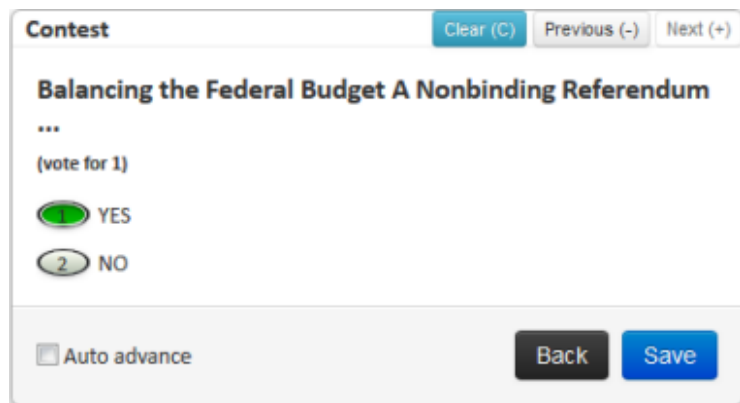
- With the number keys, click the appropriate contest to vote that choice and move to the next contest.



For contests with more than nine choices, you must use the mouse to vote for choices greater than nine.

At any point, you may click the **Back** button (or the **-** key) to go back to the previous contest, or the **Clear** button (or **C** key) to clear the current selection.

5. When you come to the final contest on the ballot, the **Next** button is disabled. Vote that contest and then click **Save**.



The screenshot shows a 'Contest' dialog box with a title bar. At the top right are buttons for 'Clear (C)', 'Previous (-)', and 'Next (+)'. The main content area displays the text 'Balancing the Federal Budget A Nonbinding Referendum' followed by three dots and '(vote for 1)'. Below this are two radio button options: '1 YES' (which is selected) and '2 NO'. At the bottom left is a checkbox labeled 'Auto advance'. At the bottom right are 'Back' and 'Save' buttons.

Figure 3-8. Voting the final contest



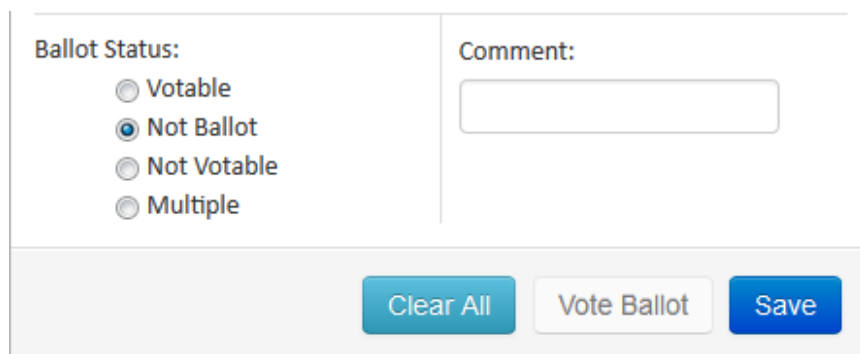
In the **Resolving Ballots** tool, the ballot now appears in the **Resolved Ballots** section.

3.7 Processing an image that is not a ballot

A non-ballot is a target (separator) card or other sheet of paper in a stack of ballots that should not be tabulated.

To process a non-ballot in the **Ballot Configuration** editor:

1. Select **Not Ballot**.



The screenshot shows a 'Ballot Configuration' dialog box. On the left, under 'Ballot Status:', there are four radio button options: 'Votable', 'Not Ballot' (which is selected), 'Not Votable', and 'Multiple'. On the right, under 'Comment:', there is a text input field. At the bottom are three buttons: 'Clear All', 'Vote Ballot', and 'Save'.

Figure 3-9. Not Ballot status setting

2. Click **Save**.

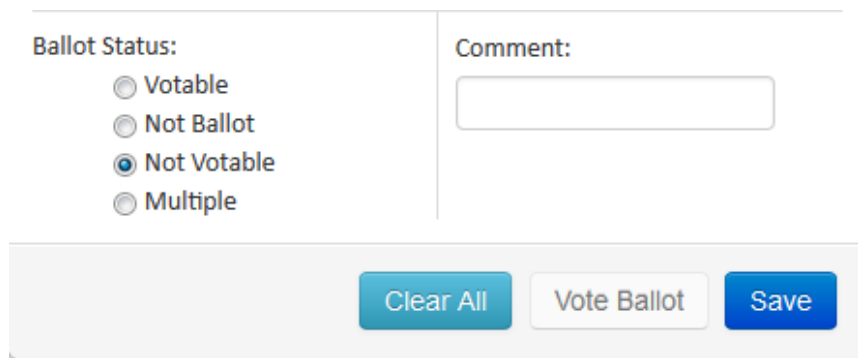
The non-ballot is now excluded from tabulated counts.

3.8 Processing an image that is not votable

At times a ballot image may be considered not votable, based on the jurisdiction's policies. For example, if a note stuck to a ballot hides some of its ovals, it may be classified as not votable.

To process an image that is not votable in the **Ballot Configuration** editor:

1. Select **Not Votable**.
2. Click **Save**.
3. Delete the box containing this ballot from the system.
4. Retrieve the ballot in question, as described in [Scanning for a specific ballot](#).
5. Fix the problem and rescan the box.



The screenshot shows a web-based form for configuring a ballot. It is divided into two main sections. The left section, titled 'Ballot Status:', contains four radio button options: 'Votable', 'Not Ballot', 'Not Votable' (which is selected with a blue dot), and 'Multiple'. The right section, titled 'Comment:', contains an empty text input field. At the bottom of the form, there are three buttons: 'Clear All' (light blue), 'Vote Ballot' (light blue), and 'Save' (dark blue).

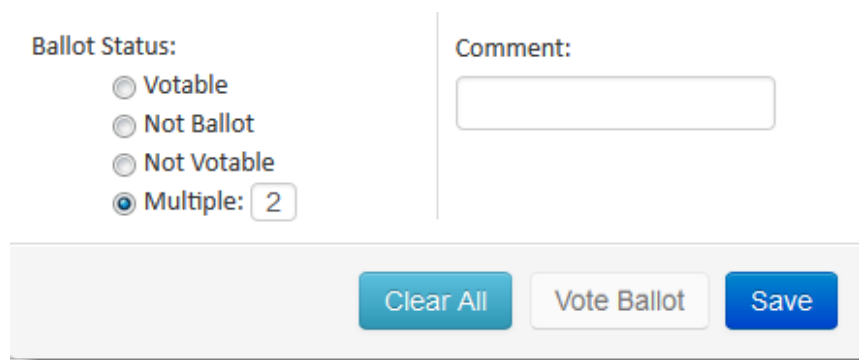
Figure 3-10. Not Votable status setting

3.9 Processing an image with multiple ballots

Occasionally, two or more ballots may stick together and be pulled through the scanner at the same time.

To process an image consisting of multiple ballots:

1. In the **Ballot Configuration** editor, click **Multiple**.
2. In the **Multiple** text box, enter the number of ballots that make up the image.
3. Click **Save**.
4. Delete the box containing this ballot from the system.
5. Retrieve the ballot in question, as described in [Scanning for a specific ballot](#).
6. Fix the issue and rescan the box.



The screenshot shows a software interface for configuring ballot status. On the left, under the heading "Ballot Status:", there are four radio button options: "Votable", "Not Ballot", "Not Votable", and "Multiple:". The "Multiple:" option is selected, and next to it is a small text input box containing the number "2". To the right of this section is a "Comment:" label above a larger text input box. At the bottom of the interface, there are three buttons: "Clear All" (light blue), "Vote Ballot" (light blue), and "Save" (dark blue).

Figure 3-11. Multiple Ballot status setting

3.10 Scanning for a specific ballot

If a specific original ballot needs to be retrieved for human review, it can be located using a scanner and Fujitsu's ScandAll PRO program, which is already installed on each ScanStation.

The following instructions apply to the fi-6800 scanner. Any differences in instructions for other scanners are noted.

To find a specific ballot:

1. Using the file name of the ballot in question in ClearCount, retrieve the appropriate box and gather its ballots at a ScanStation. (The file name appears at the top of the image, and is in the format of *boxID + number.jpg*.)

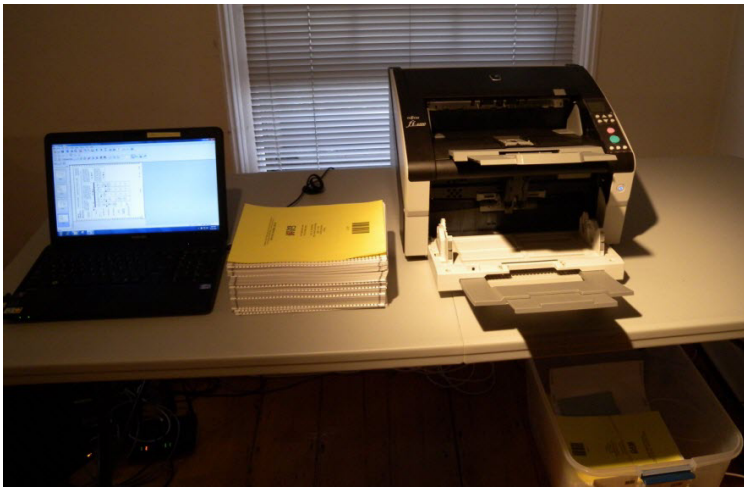


Figure 3-12. Gathering ballots at a ScanStation (fi-6800 scanner shown)



It is critically important to maintain the sequence (ballot order) of each ballot in the box. Proper organization helps to maintain ballot placement. Begin the ballot verification process with the stack of ballots face up, target card on top, on the left side of the table. The scanner should be in the middle. The scanned ballots should be placed face-down on the right side of the table.

2. Place a stack of ballots on the input tray of the scanner. Place them:
 - **Face up**—If using fi-6800.
 - **Face down**—If using fi-6670 or fi-7180.

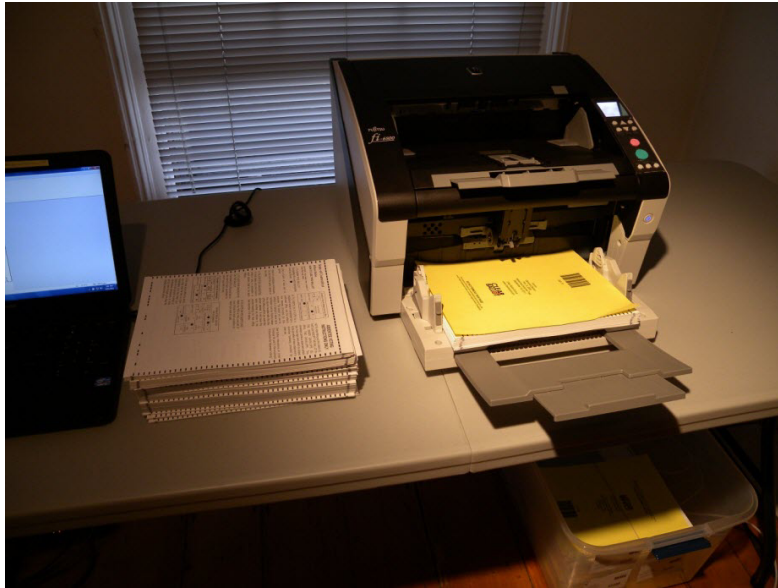


Figure 3-13. Ballots loaded on input tray

3. Scan all of the ballots.
Scanned ballots are delivered to the output tray face down.
4. On the ScanStation, open ScandAll PRO.
5. Select **Scan Settings**.



Figure 3-14. Access to ScandAll PRO Scan Settings dialog

6. In the **Scan Settings** dialog, select **Scan the specified number of pages** and provide the image number from one of the two JPEG images (front and back) generated in the initial scan. The target card is images 1 and 2, the first ballot is images 3 and 4, and so on. Either ballot image JPEG number retrieves the correct ballot.

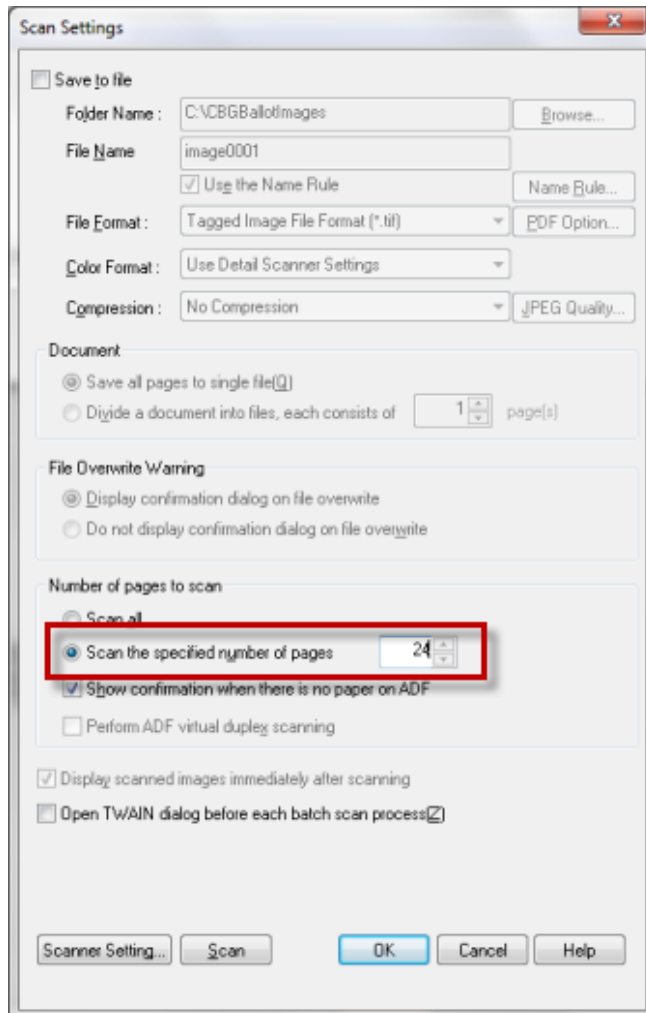


Figure 3-15. Scan the specified number of pages setting

7. Remove the scanned ballots from the output tray of the scanner and place them face down on the right side of the table.



Figure 3-16. Scanning for a specific ballot (fi-6800 scanner shown)

8. When you have identified the appropriate ballot from the output tray, note which side is on top and then remove it from the tray.

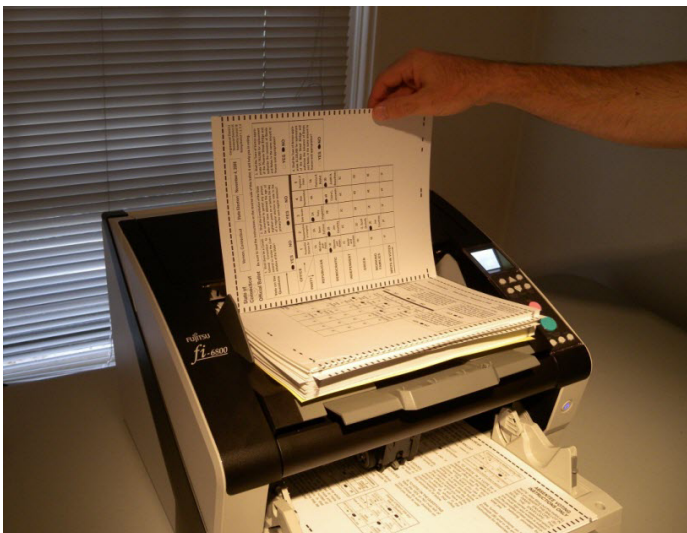


Figure 3-17. Temporary removal of ballot (fi-6800 scanner shown)

9. After completing the ballot verification process, return the ballot to the output tray in the same manner that it was removed.
10. Remove the scanned ballots from the output tray and place them face down (target card on bottom) on the right side of the table.

11. Take the unscanned ballots from the input tray and transfer them to the top of the unscanned deck on the left side of the table.

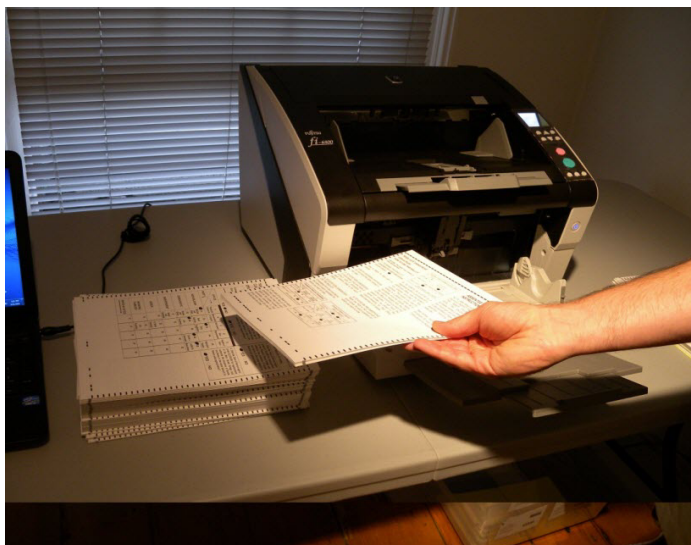


Figure 3-18. Unscanned ballots returned to stack (fi-6800 scanner shown)



For the fi-6670 only, you must flip over the ballots because they are face down.

12. Pick up the scanned ballots from the right side of the table and flip them over so the target card is now facing up. Place this stack on top of the unscanned stack of ballots on the left side of the table. You should now have a complete batch with the target card face up on the left side of the table.

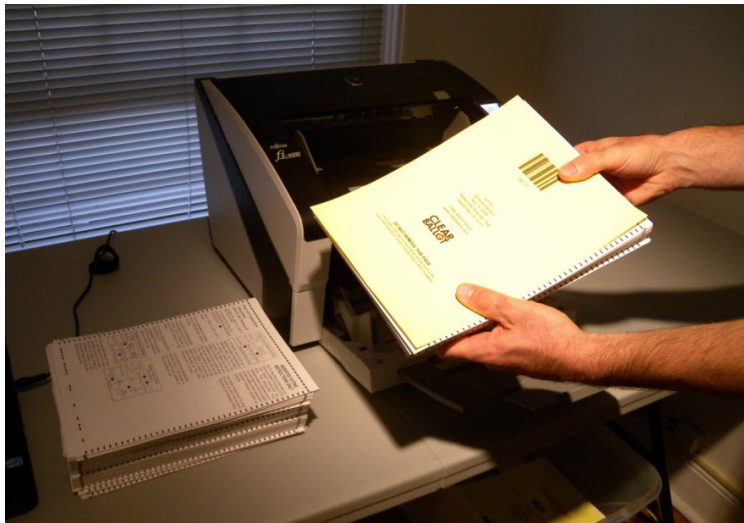


Figure 3-19. Scanned and unscanned ballots combined (fi-6800 scanner shown)

The stack of ballots is restored to its original sequence.

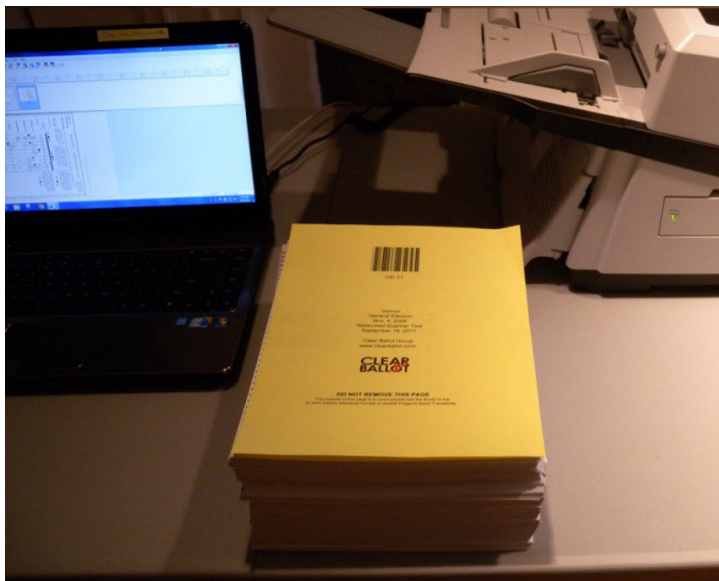


Figure 3-20. Ballot stack restored to original state

13. To prevent the Tabulator from accidentally counting images from the current session in the next session, delete any new images that were scanned from C:\CBGBallotImages (the image capture folder).

Chapter 4. ClearCount administration

Administrative tasks include:

- Managing elections on the next page
- Managing users on page 102

4.1 Logging in as administrator

To log in to ClearCount as an administrator:

1. On an Election Administration Station, open a browser window.
2. In the address field, enter the URL defined for the ClearCount host (ScanServer) computer when ClearCount was installed, for example, `http://ScanServer`.
The **Clear Ballot** login dialog appears.
3. In **Username**, enter the case-sensitive administrative username defined at installation.
4. In **Password**, enter the case-sensitive administrative password defined at installation.
5. Click **Sign in**.

The [Election Index](#) page appears.



To select administrative roles, click open the dropdown list in the upper right corner of the browser window.

4.2 Managing elections

Election administration tasks include:

- Creating elections and setting their state within ClearCount.
- Exporting the cast vote record for an election.
- Enabling comparison of election results.
- Backing up and restoring elections.
- Deleting unused elections.

4.2.1 Election Administration page

From the Election Administration page, users whose access level is [dbadmin](#) or above can manage elections.

Clear Ballot Mary ▾

Election Administration

Home [Create Election](#) [Restore Election](#)

Filter table:

Election	Active	Ballots	Ballot Type	Phase	Scan Date	Tabulation Date	Actions
ny_anycounty_2012g	Active	7,759	Dominion	scanning	2012-12-18	2014-12-22	
ny_countyname_2012g		0	Dominion	scanning	None	None	

10 ☐ entries per page 1 to 2 of 2

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Figure 4-1. Election Administration page, Home tab

4.2.2 Election naming rules and conventions

Election names must conform to the following rules:

- Maximum of 64 characters.
- May contain lower- or uppercase letters, digits (0–9), underscores (_), and dollar signs (\$).
- May begin with a digit but may *not* consist solely of digits.
- May *not* contain forward slashes, backslashes, periods, colons, or any other character not allowed in a Windows file or folder name.
- May *not* contain single quotation marks, double quotation marks, or backticks (grave accents).
- May *not* end in a space.

For ease of use, name your election using the same convention employed by Clear Ballot Group to name BDFs:

StateCode_Jurisdiction_ElectionYearAndType

For example:

ny_anycounty_2012g

4.2.3 Creating an election

To create an election:

1. Obtain the Ballot Definition File (BDF) zip archive for the election from Clear Ballot.



See *ClearCount Election Preparation and Installation Guide*, **About Ballot Definition Files** for more information.

2. Copy the BDF archive file to an Election Administration Station.



The location of the BDF repository is user-defined.

3. [Log in to ClearCount as administrator](#).

The [Election Index](#) page appears.

4. From the dropdown list (upper right corner), select **Election Administration**.

The **Election Administration** page appears.

5. Select the **Create Election** tab.

The screenshot shows the 'Clear Ballot' application interface. At the top is a dark header with a back arrow and the text 'Clear Ballot'. Below this is the 'Election Administration' section. It features three tabs: 'Home', 'Create Election' (which is active), and 'Restore Election'. Under the 'Create Election' tab, there is a 'New Election Name:' label followed by a text input field. Below that is a 'Ballot Definition Files (BDFs):' label, a 'Browse...' button, and the text 'No file selected.'. At the bottom of the form is a large blue 'Create Election' button.

Figure 4-2. Create Election tab

6. In **New Election Name**, enter a valid name for the election.
Follow the guidelines in Election naming rules and conventions on the previous page.

7. Click **Browse** to locate the BDF you copied to the computer.
8. Double-click the BDF file to copy its path into **Ballot Definition Files (BDFs)**.
9. Click **Create Election**.

The new election appears in the Election Index and is set as the active election.



Going forward, the Tabulator applies ballots to the active election.

4.2.4 Changing the election phase

Election phases include the following:

Table 4-1. Election phases

Phase	Description
scanning	Ballots can still be scanned or modified through adjudication by users whose access level is modify or above.
reviewing	Ballots can no longer be scanned but adjudication by users whose access level is modify or above is still allowed.
closed	The election is locked against additions or modifications.

To change the phase of an election:

1. Access the [Election Administration](#) page.
2. Locate the row that contains the election whose ballot(s) you want to modify.

3. In the **Phase** column, click the current phase.

The **Change Election Phase** dialog appears.

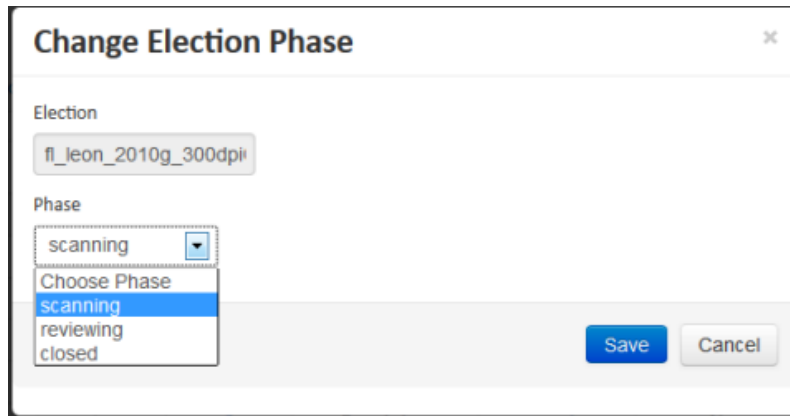


Figure 4-3. Change Election Phase dialog

4. Click open the **Phase** dropdown list.

The **Choose Phase** list appears.

5. Select a different phase from the list.
6. Click **Save**.



If the phase of an election is changed from scanning to either of the other phases, the election becomes inactive. No election is active until one is explicitly selected or a new election is created.



Backups made through ClearCount include the current phase of any election. Therefore elections restored to the database from backup retain their phase settings. For example, an election closed at time of backup is restored as a closed election.

4.2.5 Changing the active election

Only one election can be active at a time. To change which election is active:

1. Access the [Election Administration](#) page.
2. Identify the election you want to activate.
3. In the **Active** column, click the gray arrowhead for the identified election.

The arrowhead you clicked changes to the **Active** indicator.



If another election was active, its **Active** indicator changes to an arrowhead.

4.2.6 Deactivating the active election

To deactivate the active election:

1. Access the [Election Administration](#) page.
2. Locate the row that contains the active election.
3. Click the button in the **Actions** column for that row.
The dropdown list of election management actions appears.
4. Select **Make Election no longer active**.

For now, no election is active.



No changes can be made to, or ballots scanned into, the deactivated election. The election must be reactivated if any actions are necessary.

4.2.7 Enabling comparison of election results

To enable reports that compare election results produced by ClearCount and another system, the ClearCount administrator must import a Comparison Results File (CRF) provided by Clear Ballot Group.

To import a CRF file into ClearCount:

1. Obtain the CRF file and corresponding CRF digest for the election from Clear Ballot.
2. Copy the CRF file to an Election Administration Station.
3. [Log in to that Election Administration station as an administrator](#).
4. From the dropdown list (upper right corner), select **Election Administration**.

The [Election Administration](#) page appears.

5. Locate the row that contains the election whose results you want to compare.
6. Click the button in the **Actions** column for that row.
The dropdown list of election management actions appears.
7. Select **Import Comparison Results (CRF)**.

The **Import Comparison Results File (CRF)** dialog appears.

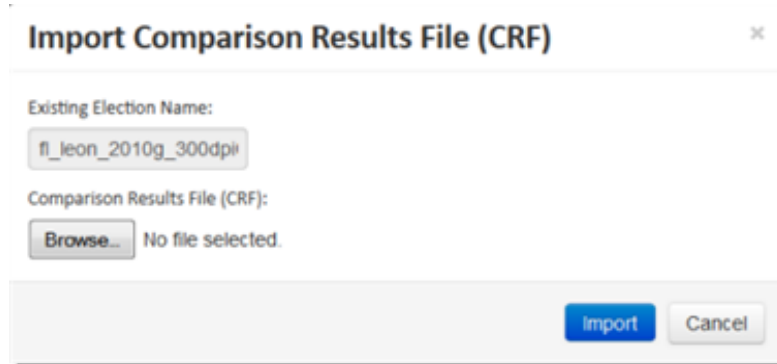


Figure 4-4. Import Comparison Results File dialog

8. Click **Browse** to locate the provided CRF file.
9. Double-click the CRF file to copy its path into **Comparison Results File (CRF)**.

10. Click **Import**.

The CRF digest message appears, for example:

Incomplete vsvotes table -- Added ballot count information from vsballots into vsvotes
Database ny_anycounty_2012g tables were imported (BDF digest:
259ef731c17f46172d4586f29d43ade38d0a46cc1ffeb3fd5b9143accb361c72)

11. (Recommended) Compare the CRF digest in the message to the value you received from Clear Ballot.
12. Dismiss the CRF digest message.

[Audit](#) reports are now enabled.

4.2.8 Exporting a cast vote record

The cast vote record (CVR) for an election comprises a set of comma-separated value (CSV) files whose names are:

Election_Name.choices
Election_Name.contests
Election_Name.cvr
Election_Name.parties
Election_Name.precincts

To export a cast vote record:

1. [Log in to an Election Administration station as an administrator.](#)

2. From the dropdown list (upper right corner), select **Election Administration**.

The [Election Administration](#) page appears.

3. Locate the row that contains the election whose CVR you want to export.

4. Click the button in the **Actions** column for that row.

The dropdown list of election management actions appears.

5. Select **Export Cast Vote Record**.

The **Opening Election** dialog appears.

6. Do one of the following:

- Click **Open**.

ClearCount opens a temporary folder that contains the CVR file set.



The files are *not* saved automatically.

- Click **Save** (or **Save as**).

ClearCount provides an archive file that contains the CVR file set. If you click **Save**, a file named *Election_Name.cvr.zip* automatically appears in the **Downloads** folder.



The archive can be copied to an external drive.

4.2.9 Backing up an election

Backups comprise election-specific data, including related ballot image files and log entries. Backing up an election consists of exporting the data to an external drive and then securing that drive.



Backups do *not* include machine-specific ClearCount server log entries or Windows logs.



Time required to back up an election depends on its size. A large election could take an hour or more.



Supported file systems that can be used on an external backup hard drive include: NTFS; ext2; ext3; and ext4.

To back up an election:

1. Connect an external drive to the ScanServer.

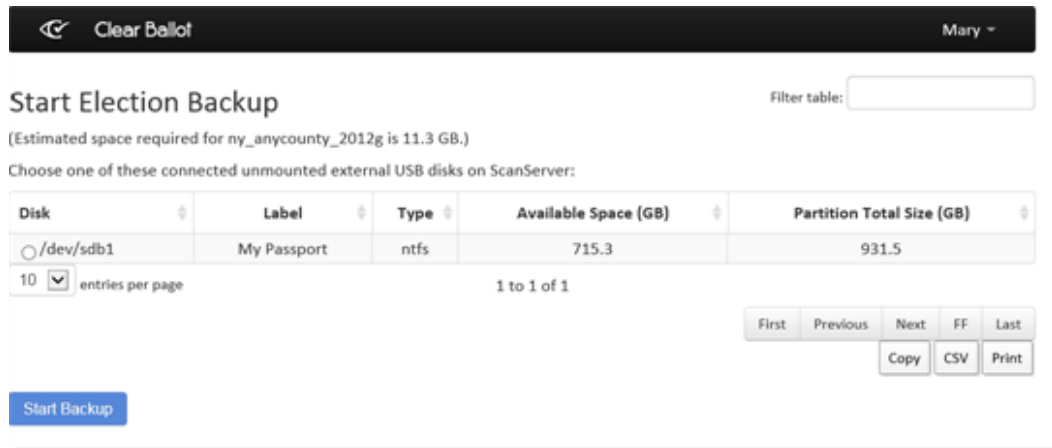


ClearCount mounts and unmounts the external drive.

2. At an Election Administration Station, access the [Election Administration](#) page.
3. Locate the row for the election you want to back up.
4. (If necessary) [Change the election phase to closed.](#)
5. Click the button in the **Actions** column for that row.
The dropdown list of election management actions appears.

6. Select **Backup Election**.

The **Start Election Backup** page appears.



Clear Ballot Mary ▾

Start Election Backup

Filter table:

(Estimated space required for ny_anycounty_2012g is 11.3 GB.)

Choose one of these connected unmounted external USB disks on ScanServer:

Disk	Label	Type	Available Space (GB)	Partition Total Size (GB)
<input checked="" type="radio"/> /dev/sdb1	My Passport	ntfs	715.3	931.5

10 ▾ entries per page 1 to 1 of 1

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[Start Backup](#)

Figure 4-5. Start Election Backup page

7. Determine whether the backup drive has enough free space.



The minimum *reported* is 0.5 Gb, however, small elections may require less space.

The backup must fit on one external disk. Any device connected to the Election Administration Station that lacks sufficient free disk space is displayed in red.

8. Select an available backup device.



Every backup on a disk must have a unique name. To avoid overwriting an existing backup, you must rename that file (for example, by adding a suffix) or use a different external disk.

9. Click **Start Backup**.

The **Server Background Jobs** page appears unless the election is very small, in which case the backup completes quickly. It includes all jobs started since the last reboot of the ScanServer computer. The **Progress** cell for the running job refreshes every 10 seconds while the job is running. The **Status** cell indicates when the election is backed up.

Clear Ballot

Mary ▾

Server Background Jobs

Filter table:

JobID	Time	Job	Progress	Status	Final Result
2	2014-12-23 11:33:24	backup	2.04	ny_anycounty_2012g ballot images being saved	
1	2014-12-18 16:34:56	backup		Completed	Backup of ny_richmond_2012g saved to /media/sdb1/Backups/ny_richmond_2012g

10 ▾

entries per page

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Figure 4-6. Server Background Jobs page

10. When the job is completed, secure the external drive in a safe.

4.2.10 Restoring an election

To restore or recreate a backed-up election:

1. Connect the external drive on which the backup resides to the ScanServer.



ClearCount mounts and unmounts the external drive.

2. At an Election Administration Station, from the [Election Administration](#) page, click the **Restore Election** tab.

The **Start Election Restore** page appears.

Clear Ballot Mary ▾

Start Election Restore

Filter table:

Choose one of these connected unmounted external USB disks on ScanServer:

Disk	Election Backup	Label	Type	Partition Total Size (GB)
<input type="radio"/> /dev/sdb1	ny_anycounty_2012g	My Passport	ntfs	931.5

All entries per page 1 to 1 of 1

New Election Name (if desired):

Figure 4-7. Start Election Restore page

3. In the **Disk** column, select the external drive where the election you want to restore is stored.
4. (Optional) **In New Election Name**, enter the name under which to restore the election.



ClearCount uses the name under which the election is backed up by default. However, if the database currently contains an election with this name, it is overwritten.

5. Click **Start Restore**.

The **Server Background Jobs** page appears unless the election is very small, in which case the restore completes quickly. It includes all jobs started since the last reboot of the ScanServer computer. The **Progress** cell for the running job refreshes every 10 seconds while the job is running. The **Status** cell indicates when the election is restored.

Clear Ballot

Mary

Server Background Jobs

Filter table:

JobID	Time	Job	Progress	Status	Final Result
1	2014-12-24 13:27:53	restore		Completed	Restore of ny_anycounty_2012g copied from /media/sdb1/Backups/ny_anycounty_2012g

10

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entries per page

1 to 1 of 1

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Figure 4-8. Server Background Jobs page

6. Disconnect the external drive.

4.2.11 Deleting an election

To delete an election from the database:

1. Back up the election you want to delete on an external drive.



In most cases, elections *must* be backed up before they can be deleted. Consult your local statutes for details.

2. Access the [Election Administration](#) page.

3. Locate the row that contains the backed-up election.

4. Click the button in the **Actions** column for that row.

The dropdown list of election management actions appears.

5. Select **Delete Election**.

A confirmation dialog appears.

6. Click **OK** to continue.

ClearCount deletes the election from the database.



Data for the deleted election is inaccessible until the backup is restored to the database.

4.3 Managing users

ClearCount user administration tasks include:

- Creating Election Administration station users.
- Changing attributes of Election Administration station users, including:
 - Name
 - Password
 - ClearCount permissions
 - Access to specific elections in the database
- Deleting Election Administration station users.
- Changing passwords for ScanStation (remote) users.

4.3.1 Accessing the User Administration page

To access the **User Administration** page:

1. Log in to an Election Administration Station as an administrator.
2. Click open the user dropdown list (upper right corner of the browser window).
3. From the dropdown list, select **User Administration**.

The **User Administration** page appears. Its tabs include:

- [Browser Users](#)
- [Remote Users](#)
- [System](#)

4.3.1.1 Browser Users tab

The Browser Users tab displays users that access the system in a browser window. This includes the users that the administrator creates.

[Clear Ballot](#) Mary ▾

User Administration

[Browser Users](#) [Remote Users](#) [System](#)

[Add User](#)

Filter table:

User	Access	Election	Actions
Mary	useradmin	(all)	
Reed	none	(all)	
cbg	useradmin	(all)	

All ▾ entries per page


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Figure 4-9. Browser Users tab

4.3.1.2 Remote Users tab

The Remote Users tab lists users that access the election database by making a remote procedure call. Typically, it lists the ScanStation user. This makes it possible to control access to the Tabulator on each ScanStation as well as specify the election(s) it can access. If the elections in the **Database** column are collapsed, click  to expand them.

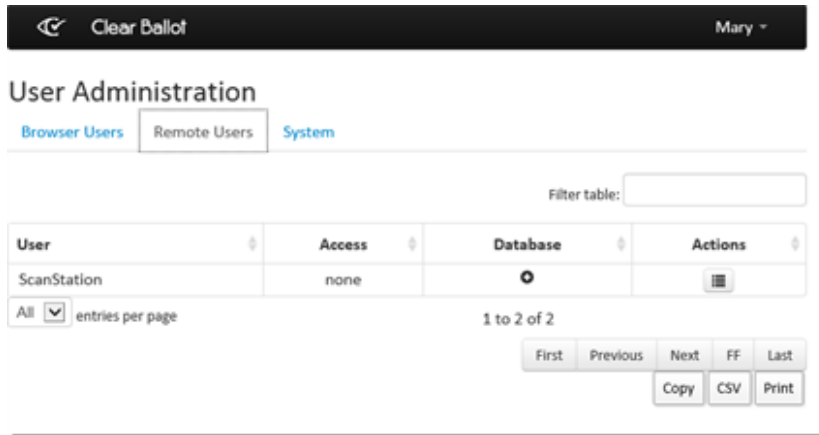


Figure 4-10. Remote Users tab

4.3.1.3 System tab

The System tab lists default system users.



Do not delete any of the default user accounts.

Clear Ballot Mary

User Administration

Browser Users Remote Users System

Filter table:

User	Access	Database
app_cbgweb	none	{all}
app_webimage	read	{all}
debian-sys-maint	useradmin	{all}
root	useradmin	{all}

All entries per page 1 to 4 of 4

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Figure 4-11. System tab

The following table describes the roles of the default system users.

User	Purpose
app_cbgweb	Account used internally to access special databases. Note that this account has no access to elections.
app_webimage	Account used internally.
debian-sys-maint	Account used internally by the ScanServer to perform system maintenance such as background optimization.
root	Account added at installation.

4.3.2 Adding a browser user

Each ClearCount user on your staff should have their own user account, set with the precise permissions allowed. By giving each user a separate account, you can clearly identify each logged action by the user who performed it.

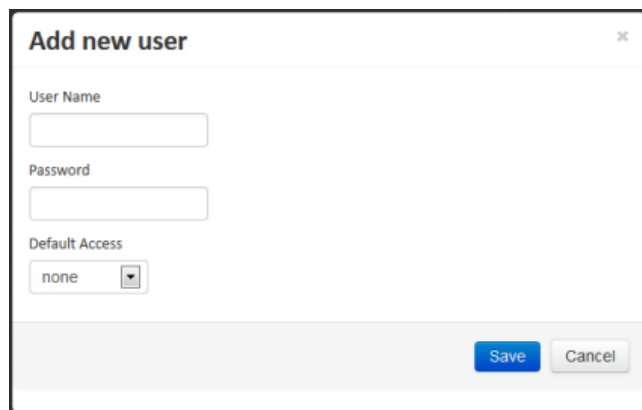


See Login credential rules and guidelines on page 127 for detailed information setting user names and passwords.

To add a new user:

1. Access the **User Administration** page.
2. Select the **Browser Users** tab.
3. Click **Add User**.

The **Add New User** dialog appears.



The screenshot shows a dialog box titled "Add new user". It has a close button (X) in the top right corner. Inside the dialog, there are three input fields: "User Name", "Password", and "Default Access". The "Default Access" field is a dropdown menu currently showing "none". At the bottom right of the dialog, there are two buttons: "Save" (highlighted in blue) and "Cancel".

Figure 4-12. Add New User dialog

4. In **User Name**, enter the name of the new user.
5. In **Password**, enter the password of the new user.

6. In the **Default Access** dropdown list, select one of the following levels:

Access Level	Description
none	No access to the system allowed. Use this level to restrict a user without deleting them.
read	User can view election reports but cannot modify anything.
append	User can add new database ballot records and new ballot images by scanning. The ScanStation user has this level of access.
modify	User can modify existing contents of the election using the Ballot Resolver™ application. This user may also use the DeleteBox utility to delete a box from the system so that it may be rescanned.
dbadmin	User can add or delete election databases as well as change a database's status. The dbadmin user can grant themselves modify access to any database they create.
useradmin	User account management (the ability to add, modify, and delete users).

7. Click **Save**.

4.3.3 Renaming a browser user

To rename a browser user:

1. Access the **Browser Users** tab of the **User Administration** page.
2. Locate the row for the user whose name you want to change.
3. Click the button in the **Actions** column and select **Rename User**.

The **Rename User** dialog appears.

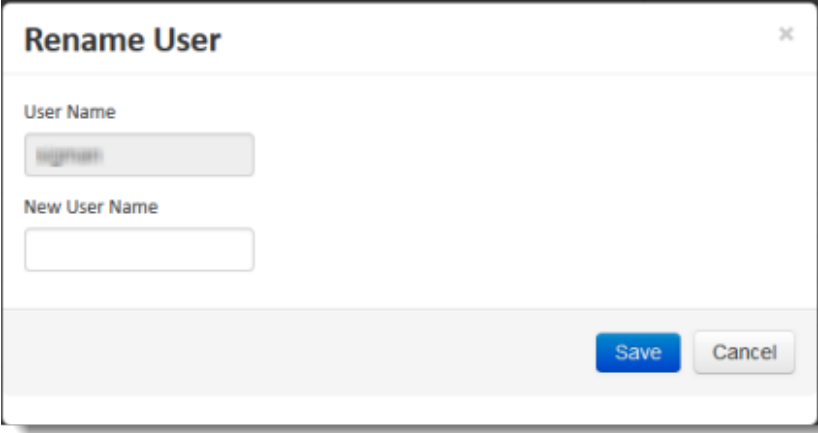
A screenshot of the 'Rename User' dialog box. The dialog has a title bar with the text 'Rename User' and a close button (X). Inside the dialog, there are two text input fields. The first field is labeled 'User Name' and contains the text 'signature'. The second field is labeled 'New User Name' and is empty. At the bottom right of the dialog, there are two buttons: 'Save' (in blue) and 'Cancel' (in light gray).

Figure 4-13. Rename User dialog

4. In **New User Name**, enter the replacement user name.
5. Click **Save**.

4.3.4 Changing the password of a browser user

To change the password of a browser user:

1. In the **User Administration** page's **Browser Users** tab, locate the row for the user whose password you want to change.
2. Click the button in the **Actions** column and select **Change User Password**.

The **Change User Password** dialog appears.

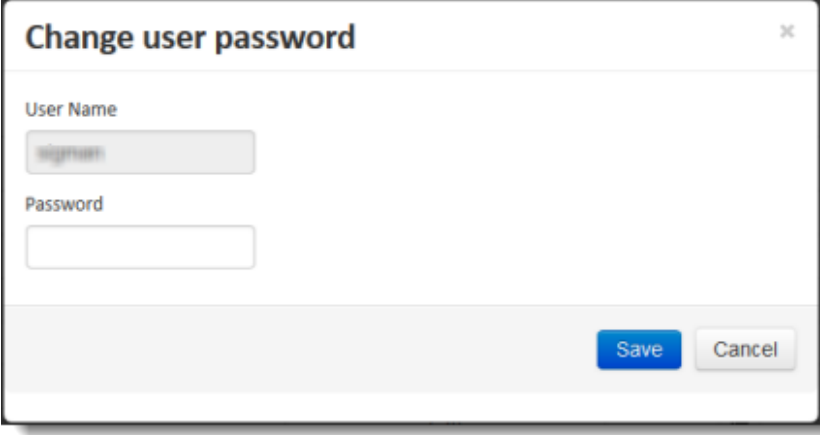
A screenshot of a web-based dialog box titled "Change user password". The dialog has a close button (X) in the top right corner. It contains two input fields: "User Name" with the text "sigman" entered, and "Password" which is empty. At the bottom right, there are two buttons: "Save" (highlighted in blue) and "Cancel".

Figure 4-14. Change User Password dialog

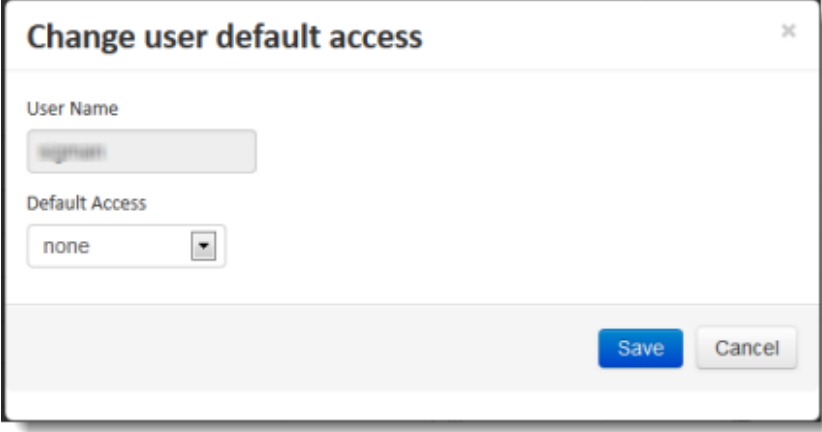
3. In **Password**, enter in the new password.
4. Click **Save**.

4.3.5 Changing the permissions of a browser user

To change the permissions of a browser user:

1. In the **User Administration** page's **Browser Users** tab, locate the row for the user whose permissions you want to change.
2. In the **Access** column, click the current access level.

The **Change user default access** dialog appears.

A screenshot of a web-based dialog box titled "Change user default access" with a close button (X) in the top right corner. The dialog contains two input fields: "User Name" with a text box containing "sigman" and "Default Access" with a dropdown menu currently set to "none". At the bottom right of the dialog are two buttons: a blue "Save" button and a grey "Cancel" button.

Change user default access

User Name
sigman

Default Access
none

Save Cancel

Figure 4-15. Change User Default Access dialog

3. From the **Default Access** dropdown list, change the access level.
4. Click **Save**.

4.3.6 Changing election access for a browser user

The current permissions of a ClearCount user determine their default access to all elections in the database. ClearCount allows exceptions for specific elections. Any non-administrative user can be assigned a *higher* level of non-administrative access to an election. For example, a user with read access can be assigned append or modify access.

To change access to a specific election for a browser user:

1. Access the **User Administration** page.
2. Select the **Browser Users** tab.
3. Locate the row for the user who requires access to an election.
4. Click the button in the **Actions** column and select **Add Election Access** from the menu.

The **Add access to Election** dialog appears.

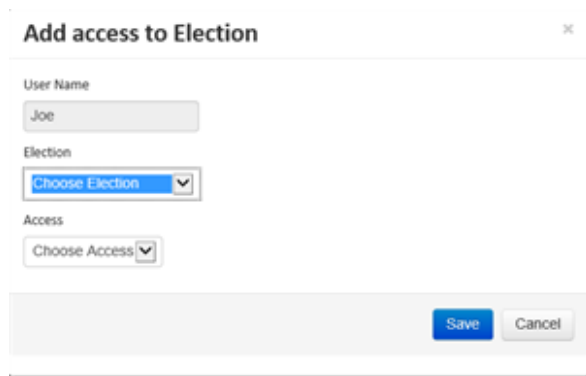


Figure 4-16. Add access to Election dialog

5. From the **Election** dropdown list, select any election in the database.
6. From the **Access** dropdown list, change the access level.
7. Click **Save**.

4.3.7 Removing access to an election for a browser user

To remove access to a specific election for a browser user:

1. Access the **User Administration** page.
2. Select the **Browser Users** tab.
3. Locate the row for the election access override you want to remove.
4. Click the button in the **Actions** column and select **Remove Election Access**.

The election access override disappears immediately.

4.3.8 Deleting a browser user

To delete a browser user:

1. Access the **User Administration** page.
2. Select the **Browser Users** tab.
3. Locate the row for the user you want to delete.
4. Click the button in the **Actions** column and select **Delete user**.

The user disappears immediately.



To "temporarily" remove a user, you can change their access level to none.

4.3.9 Changing the password of the Tabulator user

To change the password of the Tabulator user:

1. In the **User Administration** page's **Remote Users** tab, locate the row for the Tabulator whose password you want to change.
2. Click the button in the **Actions** column and select **Change User Password**. (This is the sole option on the menu.)

The **Change user password** dialog appears.

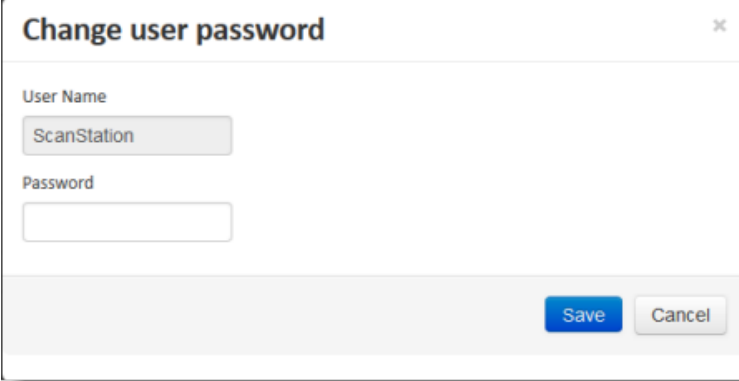
A screenshot of a 'Change user password' dialog box. The dialog has a title bar with the text 'Change user password' and a close button (X). Inside the dialog, there are two input fields: 'User Name' with the value 'ScanStation' and 'Password' which is empty. At the bottom right, there are two buttons: 'Save' (blue) and 'Cancel' (grey).

Figure 4-17. Change User Password dialog

3. In **Password**, enter in the new password.
4. Click **Save**.

Chapter 5. ClearCount log files

ClearCount tracks all user and system actions, normal and abnormal, in these read-only logs:

- [Election Activity](#)—Includes the selected election.
- [Web Activity](#)—Includes all current elections of a jurisdiction.

Any user with read access level or above can view either log on an Election Administration Station. They can also share the logs by copying, exporting, or printing. (See Sharing election data on page 23.)

5.1 Election Activity log

For each election, ClearCount generates an Election Activity log. Every action in an individual election is recorded for its Election Activity log.

The Election Activity log lists:

- User access to election reports and logs
- Tabulator start, processing, and end events
- Probable target card and scanning error identification
- Server warning and error messages

The log also presents the overall scanning rate and progress across ScanStations.

Election backups include the Election Activity log.

Time	Source	Election	User	Machine	Severity	Message	URL
2014-12-03 18:53:56	WebServer	ny_anycounty_2012g	cbg	192.168.15.48	info	Dashboard - ny_anycounty_2012g	/dash/ny_anycounty_2012g
2014-12-03 18:54:06	WebServer	ny_anycounty_2012g	cbg	192.168.15.48	info	Dashboard - ny_anycounty_2012g	/dash/ny_anycounty_2012g
2014-12-03 19:59:44	WebServer	ny_anycounty_2012g	Mary	192.168.15.22	info	Dashboard - ny_anycounty_2012g	/dash/ny_anycounty_2012g
2014-12-03 20:08:19	WebServer	ny_anycounty_2012g	Mary	192.168.15.22	info	Ballots - ny_anycounty_2012g	/thumbs/ny_anycounty_2012g?WasBallot=Y&WasError=N
2014-12-03 20:36:30	AdminDb	ny_anycounty_2012g	cbg	192.168.15.19	info	Database ny_anycounty_2012g tables were imported (BDF digest: d63ed6013b57085a82325f77144ac4fe99a19a997d8cb70fd8c425507fc2d677)	/admin/db/import
2014-12-03 20:36:34	WebServer	ny_anycounty_2012g	cbg	192.168.15.19	info	Dashboard - ny_anycounty_2012g	/dash/ny_anycounty_2012g
2014-12-03 20:44:03	AdminDb	ny_anycounty_2012g	cbg	192.168.15.19	info	Database ny_anycounty_2012g tables were imported (BDF digest: a05a3728160cac0bef2b91028ae8ce3ab8f3ab959add647731d7c3b46a0ad5e8)	/admin/db/import
2014-12-03 20:44:07	WebServer	ny_anycounty_2012g	cbg	192.168.15.19	info	Dashboard - ny_anycounty_2012g	/dash/ny_anycounty_2012g
2014-12-03 20:45:33	WebServer	ny_anycounty_2012g	Mary	192.168.15.22	info	Dashboard - ny_anycounty_2012g	/dash/ny_anycounty_2012g

Figure 5-1. Election Activity log

5.1.1 Accessing the Election Activity log

To access the Election Activity log:

1. Log in to an Election Administration Station.
2. From the Reports for *Election_Name* dropdown list, select **Election Activity Log**.

The Election Activity log appears.

5.1.2 Election Activity log description

The Election Activity log contains one row for each event recorded *for the selected election*. The log contains the following columns.

Time

Date and time of the election-specific event.

Source

Source of the election-specific event. One of:

- AdminDB—Includes changes made through the **Database Administration** tool (URL equivalent to `//serverName/admin/db`).
- Background—Includes tasks performed through background jobs, for example, backing up the named election.

- DeleteBox—Includes deletions of data and images for scanned boxes (so they can be rescanned).
- Resolver Tool—Includes changes made through the **Ballot Resolver** tool (URL equivalent to *//serverName/remaking*).
- Tabulator—Includes Tabulator activity at ScanStations, for example, startup, boxes being scanned, and errors (there is no URL).
- WebServer—Includes all election-specific events not covered by the other sources, for example, most user requests and interactions with reports and logs. Also includes the initial entry for any **DeleteBox** action.

Election

Name of the election.

User

Name of the user. For:

- Web-based events—Unique user who interacted with the ScanServer through a web browser at an Election Administration Station.
- Tabulator and DeleteBox events—ScanStation at which the event occurred.



This cell is empty or contains the name of the logged-in user if a second user attempts to log in and fails, usually because they entered invalid credentials.

Machine

Name or IP address of the computer from which the event originated. (ClearCount provides the IP address if the name is unavailable.)

Severity

Seriousness of the event. One of:

- Info—Used for informational messages that describe the page the user is accessing or their action (such as *Login successful for username*). The vast majority of log entries are info messages.
- Warning—Provides an alert to non-standard, but not system-threatening, actions (such as *Login failure for xyz*).
- Error—Indicates that there is a non-fatal problem (such as *Ballot image filename not found*). The system continues to execute. Errors may also include the related HTTP error.
- Fatal—Indicates an error that stops normal execution. Some Tabulator fatal errors require box deletion and restart of the Tabulator process, for example, *Scanner: Target page not read correctly (SEPARATOR0001+10001.jpg). Restart this program to delete the partial box, and then rescan entire box.*

Message

Description of the event. The level of details varies, depending on the event. This column may include status or error information. (For a list of all possible error messages and their corresponding corrective actions, see ClearCount messages on page 135.

In the Election Activity log, the message may consist of Tabulator status messages (such as *Tabulator started*) or error messages (such as *ERROR: AB-005+10483.jpg: Image height (15") is not a normal ballot - scanner probably pulled in more than one page (MULTI-GRAB)*). These are the same messages that the Tabulator displays during scanning and tabulation.

If the event is logging user access to an Election Report or other web page, the message consists of the page name the user is accessing. For example:

/dash/fl_madison_2014g

For warning and error messages, Clear Ballot Group Customer Support may request this information in order to debug the problem.

URL

Address of the Webserver or other event (as described above under **Sources**) that caused the event to begin or to be logged. For example:

/dash/fl_madison_2014g



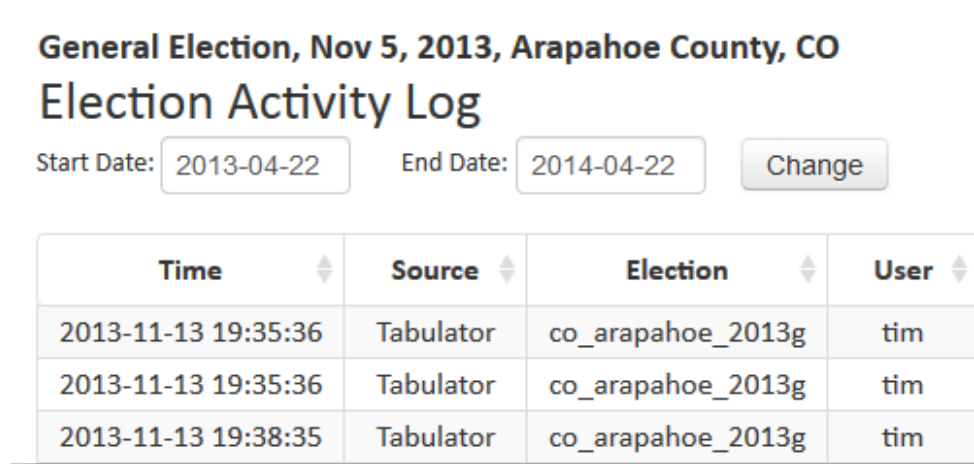
The HTTP server that resides on the ScanStation serves these URLs, which are opened in a browser on the Election Administration Station. Although these communications use the HTTP protocol, all connections between computers is over a closed, wired Ethernet connection. There is no internet connectivity or use of internet in any phase of an election.

5.1.3 Changing the date range for the Election Activity log

By default, the Election Activity log displays results for the current day only. If the range is set to be very large, the log can be slow to load.

To change the date range:

1. Access the Election Activity log.
2. Enter a new **Start Date**. If you want to focus on a date span in the past, you may also enter a new **End Date**. Date format must be YYYY-MM-DD.



The screenshot shows the 'General Election, Nov 5, 2013, Arapahoe County, CO' interface. Below the title is the 'Election Activity Log' section. It features two date input fields: 'Start Date' with the value '2013-04-22' and 'End Date' with the value '2014-04-22'. To the right of these fields is a 'Change' button. Below the date fields is a table with four columns: 'Time', 'Source', 'Election', and 'User'. Each column header has a small up/down arrow icon. The table contains three rows of data.


Time	Source	Election	User
2013-11-13 19:35:36	Tabulator	co_arapahoe_2013g	tim
2013-11-13 19:35:36	Tabulator	co_arapahoe_2013g	tim
2013-11-13 19:38:35	Tabulator	co_arapahoe_2013g	tim

Figure 5-2. Election Activity log date range

3. Click **Change**.

5.2 Web Activity log

ClearCount provides a unified Web Activity log that tracks all users' web-based actions for all of the jurisdiction's elections. This includes logins, logouts, and authentication failures, user access to election reports and ballot images, and administrative changes to elections or users. ClearCount

 Clear Ballot
 Mary ~

Web Activity Log

Filter table:

Start Date:
 End Date:

Time	Source	Election	User	Machine	Severity	Message	URL
2014-12-23 08:29:59	WebServer		cbg	192.168.15.108	info	Login successful for cbg	/login?backto=
2014-12-23 08:30:00	WebServer		cbg	192.168.15.108	info	Elections	/
2014-12-23 09:01:37	WebServer	ny_anycounty_2012g	cbg	192.168.15.108	info	Dashboard - ny_anycounty_2012g	/dash/ny_anycounty_2012g
2014-12-23 09:25:37	WebServer		cbg	192.168.15.108	info	DbAdmin	/admin/db
2014-12-23 09:26:55	WebServer		cbg	192.168.15.108	info	UserAdmin	/admin/user
2014-12-23 09:27:17	AdminUser		cbg	192.168.15.108	info	Created user Mary	/admin/user/create
2014-12-23 09:27:18	WebServer		cbg	192.168.15.108	info	UserAdmin	/admin/user
2014-12-23 09:41:29	WebServer		Mary	192.168.15.108	info	Login successful for Mary	/login?backto=
2014-12-23 09:41:30	WebServer		Mary	192.168.15.108	info	Elections	/
2014-12-23 09:41:45	WebServer		Mary	192.168.15.108	info	DbAdmin	/admin/db

All ☒ entries per page
 1 to 10 of 10

Figure 5-3. Web Activity log

5.2.1 Accessing the Web Activity log

To access the Web Activity log:

1. Log in to an Election Administration Station.
2. From the user dropdown list (upper right corner of the browser window), select **Web Activity Log**.



A user with administrative privileges sees additional options on this menu.

The Web Activity log appears.

5.2.2 Web Activity log description

The Web Activity log contains one row for each event currently recorded in the ClearCount database. The log contains the following columns.

Time

Date and time of the event.

Source

Source of the event. One of:

- AdminDB—Includes changes through the **Database Administration** tool (URL equivalent to *//serverName/admin/db*).
- AdminUser—Includes changes made through the **User Administration** tool (URL equivalent to *//serverName/user/db*).
- Background—Includes tasks performed through background jobs, for example, system maintenance activities.
- DeleteBox—Includes deletions of data and images for scanned boxes (so they can be rescanned).
- Linux—Includes ScanServer logins, logouts, and authentication failures.
- Resolver—Includes changes made through the **Ballot Resolver** tool (URL equivalent to *//serverName/remaking*).
- Tabulator—Includes Tabulator activity at ScanStations, for example, startup, boxes being scanned, and errors (there is no URL).
- WebServer—Includes all election-specific events not covered by the other sources, for example, most user requests and interactions with reports and logs. Also includes the initial entry for any **DeleteBox** action.

Election

Name of the election the web event is related to.



If a user action is not related to a specific election, this cell is empty. Examples of such events include: login attempts; accessing the Election Index; accessing the [Election Administration](#) or **User Administration** tools; and manually entering the name of a non-existent election in the browser's navigation bar (resulting in an error message in the **Message** column).

User

Name of the user. For:

- Web-based events—Unique user who interacted with the ScanServer through a web browser at an Election Administration Station.
- Tabulator and DeleteBox events—ScanStation at which the event occurred.



This cell is empty or contains the name of the logged-in user if a second user attempts to log in and fails, usually because they entered invalid credentials.

Machine

Name or IP address of the computer from which the event originated. (ClearCount provides the IP address if the name is unavailable.)

Severity

Seriousness of the event. One of:

- Info—Used with informational messages that describe the page the user is accessing or their action (such as *Login successful for username*). The vast majority of log entries are info messages.
- Warning—Provides an alert to non-standard, but not system-threatening, actions (such as *Login failure for xyz*).
- Error—Indicates that there is a non-fatal problem (such as *Ballot image filename not found*). The system continues to execute. ClearCount errors may also include the related HTTP error.
- Fatal—Indicates an error that stops normal execution. Some Tabulator fatal errors require box deletion and restart of the Tabulator process, for example, *Scanner: Target page not read correctly (SEPARATOR0001+10001.jpg). Restart this program to delete the partial box, and then rescan entire box.*

Message

Description of the event. The level of details varies, depending on the event. This column may include status or error information. (For a list of all possible error messages and their corresponding corrective actions, see ClearCount messages on page 135.

In the Election Activity log, the message may consist of Tabulator status messages (such as *Tabulator started*) or error messages (such as *ERROR: AB-005+10483.jpg: Image height (15") is not a normal ballot - scanner probably pulled in more than one page (MULTI-GRAB)*). These are the same messages that the Tabulator displays during scanning and tabulation.

If the event is logging user access to an Election Report or other web page, the message consists of the page name the user is accessing. For example:

`/dash/fl_madison_2014g`

For warning and error messages, Clear Ballot Group Customer Support may request this information in order to debug the problem.

URL

Address of the Webserver or other event (as described above under **Sources**) that caused the event to begin or to be logged. For example:

`/dash/fl_madison_2014g`



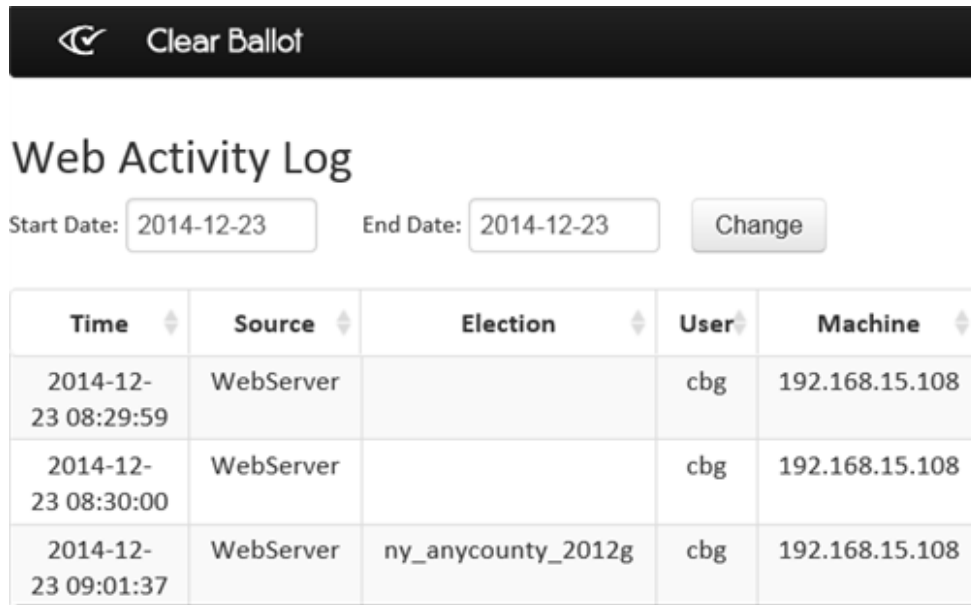
The HTTP server that resides on the ScanStation serves these URLs, which are opened in a browser on the Election Administration Station. Although these communications use the HTTP protocol, all connections between computers is over a closed, wired Ethernet connection. There is no internet connectivity or use of internet in any phase of an election.

5.2.3 Changing the date range for the Web Activity log

By default, the [Web Activity](#) log displays results for the current day only. You may extend this range, bearing in mind that the Web Activity log can become quite large and as a result slow to load when it covers an extended date range.

To change the date range for the Web Activity log:

1. In the Web Activity log, enter a new **Start Date**. If you want to focus on a date span in the past, you may also enter a new **End Date**. Date format must be YYYY-MM-DD.



The screenshot shows the 'Web Activity Log' interface. At the top is a 'Clear Ballot' button. Below the title, there are input fields for 'Start Date' (2014-12-23) and 'End Date' (2014-12-23), followed by a 'Change' button. Below this is a table with five columns: Time, Source, Election, User, and Machine. The table contains three rows of data.

Time	Source	Election	User	Machine
2014-12-23 08:29:59	WebServer		cbg	192.168.15.108
2014-12-23 08:30:00	WebServer		cbg	192.168.15.108
2014-12-23 09:01:37	WebServer	ny_anycounty_2012g	cbg	192.168.15.108

Figure 5-4. Web Activity log date range

2. Click **Change**.

Chapter 6. Interrupting and resuming scanning

To accommodate multi-session scanning, ClearCount may be shut down and restarted in between boxes, with result tabulation picking up where it left off. This section discusses how to shut down and restart ClearCount.



These tasks require dbadmin or useradmin access. Do not share the necessary passwords with ScanStation operators or any other unauthorized staff members.



If shut down, scanners can be cleaned. Cleaning the scanners regularly is essential. Dust, paper residue, and ink all accumulate inside the scanner optics and mechanisms and must be removed. At the very least cleaning the scanners must be part of your end-of-day routine; in high-volume scenarios, it should be performed every three to four hours. For detailed cleaning instructions, consult the *Fujitsu Scanner Operator's Guide* for the scanner model being used.



For details on system breakdown and storage, see *ClearCount Election Preparation and Installation Guide*.

6.1 Interrupting scanning

To shut down the ClearCount system with the intent of restarting:

1. At each ScanStation:
 - a. Wait for each Tabulator to complete all activities (scanning, scoring, and saving).



Even after physical scanning is completed, it takes some time ballots in process to be analyzed and saved. Do *not* shut down the ScanStation computer or disconnect from the network until processing is complete.

The Tabulator window indicates the progress of the ballots through tabulation and storage. Once the Tabulator indicates zero files remain to be processed, it is safe to begin the shutdown process at each scan station. In this figure, Tabulator must process two ballots before it can safely be closed:

Current Status:			
	Scanning	Scoring	Saving
Current BoxID	AB-1	AB-1	AB-1
Total ballots queued to be done	0	2	0
Time to completion	---	0:00:01	---
Current Image Twist			

Figure 6-1. Tabulator not ready to shut down state

In this figure, Tabulator has finished processing ballots and can safely be closed:

Current Status:			
	Scanning	Scoring	Saving
Current BoxID	AB-1	AB-1	AB-1
Total ballots queued to be done	0	0	0
Time to completion	---	---	---
Current Image Twist			

Figure 6-2. Tabulator ready to shut down state

- b. Click the red X in the upper right corner of Tabulator window to close the program.
 - c. (Recommended) Shut down the scanner.
 - d. Put the computer to sleep or shut it down.
2. At an Election Administration Station:
 - a. Generate a [Statement of Ballots Cast](#) report.
 - b. (Optional) Generate the [Statement of Votes Cast](#) report if it is available.
 - c. Export or print these files, as explained in Sharing election data on page 23.
 - d. Close the election as explained in Changing the election phase on page 91.
 - e. Back up the election as explained in Backing up an election on page 97.
3. Put the Election Administration Station computers to sleep or shut them down.

4. (Optional) Put the ScanServer computer to sleep or shut it down.



This step is optional because the clients are disconnected from the host.

6.2 Resuming scanning

To restart ClearCount:

1. Reactivate or restart any of the hardware (scanners, computers, or routers) that you shut down.
2. Log in to an Election Administration Station as an administrator.
3. Access the Dashboard.
4. Check the [Election Activity](#) and [Web Activity](#) logs to ensure nothing unexpected (such as unauthorized logins) occurred since the system was shut down.
5. Restart Tabulator on each ScanStation as explained in Step 1: Start Tabulator on page 3.
The administrator must enter the password in order to start Tabulator.
6. On the Election Administration Station, check the **Statement of Ballots Cast** and **Statement of Votes Cast** that you generated when shutting down the system the previous day against the live version to make sure that they match.
7. In the **Phase** column for the election, click the phase.
8. In the **Change Election Phase** dialog, in the **Status** dropdown list, click scanning, and then click **Save**.
9. Initialize the ScanStations.
10. Resume scanning.

Appendix A. Login credential rules and guidelines

Clear Ballot Group provides the following rules and guidelines for creating and maintaining login credentials for ClearCount user accounts:

Login credential rules

Username must consist of up to 16 alphanumeric characters.

Passwords must consist of up to 128 ASCII characters, and combine a variety of lowercase letters, uppercase letters, numbers, or symbols.

Username guidelines

Username appear extensively in ClearCount reports and logs. Therefore, Clear Ballot Group recommends using:

- All lowercase characters
- Employee names or derivatives rather than roles

Password guidelines

Clear Ballot Group strongly recommends implementation of the following password management guidelines:

Maintain privacy.

Passwords should be known by as few people as possible. A good practice is that each password should be known to only one person. Each person needing access to the system should be provided with a separate account.

Keep the password secret.

The password should not appear in clear text in any physical or digital media that is not stored securely (that is, it should not be taped to the monitor).

Longer passwords are more secure.

The general rule is that longer passwords are more secure than shorter passwords. It is sometimes suggested that a password should be at least eight characters long, although Clear Ballot Group recommends a password that is at least 14 characters.

Create a password that is easy to remember.

There is often a tradeoff between security and convenience. Short passwords are easy to remember but are not secure. Long passwords offer greater security but can be difficult to remember. One way to choose a password that is long enough to be secure and yet still easily remembered is to remember a phrase and to then use the first few letters of each word in that phrase. For example, the phrase the lazy dog jumps over the fence could be used to remember the password thladojuovthfe (using the first two characters of the each word in the phrase). This is 14 characters and easily remembered.

Mix at least three of: uppercase letters, lowercase letters, digits, and symbols.

For example, using the password in the previous example, th1aDoJuov+th+fe is derived by: substituting the first occurrence of l with 1; capitalizing the first letter in the words dog and jump; and using + to separate the first two letters of the last two words. Be careful not to make the changes too predictable. For example, do not always substitute i with 1 and do not capitalize the first letter of every word in the original phrase. Do not implement complicated rules that make passwords difficult to remember.

Do not use a word listed in a dictionary of any language.

Many password-guessing programs start with a dictionary of known words. This is another reason why deriving a password from a phrase makes passwords guessing more difficult.

Change passwords frequently.

Even a strong password can be discovered. For example, a password is mistakenly entered in the user name field can be logged. An individual, possibly one not authorized to use the system, may discover someone's password.

Keep the system current.

An account on the system should have its access status changed to none when the owner of that account is no longer an active or permitted user of the system.

Create a unique password.

Do not use the same passwords for multiple applications or systems. If a reused password is discovered, the security of the other applications or systems is compromised.



The ClearCount system allows an administrator to reset a user's password in the event that it is lost or compromised. Forgotten passwords *cannot* be recovered.

Appendix B. Process flows

The following checklists summarize the various stages of the election verification process. To assist your team, you can print them for use while scanning.

This appendix contains:

- Checklist 1: Prepare site and ballots below
- Checklist 2: Scan ballots on page 131
- Checklist 3: Solve common problems on page 132

B.1 Checklist 1: Prepare site and ballots

Tasks include:

- A. Preparing the site
- B. Sorting ballot boxes by voter group
- C. Preparing ballots
- D. Adding target cards and labels to boxes

A. Prepare the site

1. Set up the **Ballot Preparation Table** next to the scanning area.
2. Set up the **Target Cards & Box Label Bin** under the table.
3. Next to the table, designate areas named:
 - **Arrival from Storage**
 - **Ready for Scanning**
4. Print target cards and labels by voter group (such as AB, EV, ED, PR, OT).
5. Place the printed items in the **Target Cards & Box Label Bin**.



Figure B-1. Example of ballot preparation table

B. Sort ballot boxes by voter group

Working in the **Arrival from Storage** area, prepare to scan *all* ballots from *one* voter group at a time. For example, make a separate pile for the ballots in each of these groups:

- Absentee (AB)
- Early Voting (EV)
- Election Day (ED)
- Provisional (PR)
- Other (OT)

C. Prepare each ballot box

1. Open the box.
2. Align the ballots; use a ballot jogger if available. (Orientation is not important.)
3. Place the ballots in the box.

D. Add the target card and box label

1. Choose the next sequential target card and matching label.
2. Place the ClearCount Label on the box adjacent to the existing election label.
3. Place the matching target card *face up* on top of the ballots.
4. Close the box and move it to the **Ready for Scanning** area.

B.2 Checklist 2: Scan ballots

Tasks include:

- A. Positioning the ballots
- B. Scanning the ballots

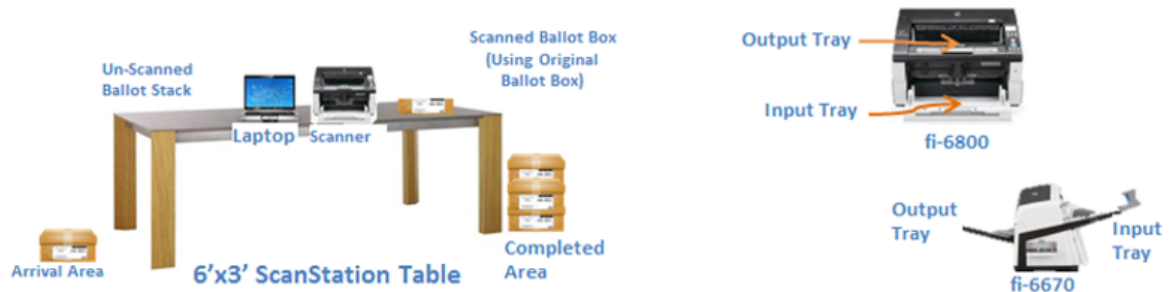


Figure B-2. Example of ScanStation table

A. Position the ballots

1. Move *one* ballot box from the **Arrival from Storage** area to the left side of the ScanStation table.
2. Open this ballot box and confirm that a target card is on top of the ballot stack.
3. Place the target card in the input tray of the scanners:
 - **Face up**—If using fi-6800.
 - **Face down**—If using fi-6670 or fi-7180.
4. Place the ballots in the **Unscanned Ballot Stack** area.
5. Move the now empty ballot box to the **Scanned Ballot Box** area.

B. Scan the ballots

1. Push the **Start Scan** button on the scanner. The scanner captures the target card, which moves from the Input Tray to the Output Tray.
2. Confirm that the Tabulator data, target card, and box label all match.
3. Place the target card face down in the **Scanned Ballot Box** area.
4. Move ballots from the unscanned stack to the scanner's input tray. Do not overload the tray; orientation is unimportant. Click **Yes** when the Tabulator asks whether to continue scanning. The scanner moves these ballots to the output tray as they are read.

5. Transfer the scanned ballots from the scanner's output tray to the **Scanned Ballot Box** *without* changing the order or orientation. Ballots scanned first are on the bottom.
6. Repeat steps 4 and 5 until the entire stack is scanned.
7. Click **No** when the Tabulator asks whether to continue scanning. This action completes the box.
8. Seal the original ballot box and place it in the **Completed** area.
9. Repeat Tasks B and C until no boxes remain in the **Arrival from Storage** area.

B.3 Checklist 3: Solve common problems

This is a list of common errors. When in doubt, delete the box and rescan it to avoid errors. For additional information, refer to the Fujitsu scanner documentation, or contact Clear Ballot Group technical support.

Box requires rescanning

If an operator accidentally terminates a box before all ballots are scanned, or ballots fall out of order, run the **Delete Box** utility and start the standard procedure for scanning a box from the beginning.

Ballot misfeed

When this problem occurs, the scanner reports a multifeed or paper jam. Remove the offending ballots from the scanner and reinsert them in the hopper for rescanning. (If ballots are crumpled, folded, or torn, attempt to smooth them to aid in the scanning process.) If the identity of the target card is lost, rescan the box.

If a significant number of unexpected multifeeds occur, check the sensors within the scanner, because occluded sensors can cause multifeeds.

Target card not read

Close Tabulator when it reports this error, delete the box, restart Tabulator, and rescan the box, ensuring the target card is placed so the scanner reads the bar-coded side first.

Scanner does not start

Scanning cannot occur if ballots do not trigger the paper sensor on the document feeder, for example, because the paper is curled upward. In these cases, there is no response to the Start Scan button or the scanner incorrectly reports that the input tray is empty. With your fingers, press down at the center of the leading edge of the paper and press the Start Scan button.

Fatal Tabulator error

A Tabulator error message or exception is highlighted by a red background in the Tabulator Alerts box as shown in the figure. Report the error to Clear Ballot Group Technical Support. Close Tabulator, delete the box being scanned, restart Tabulator, and rescan the box.

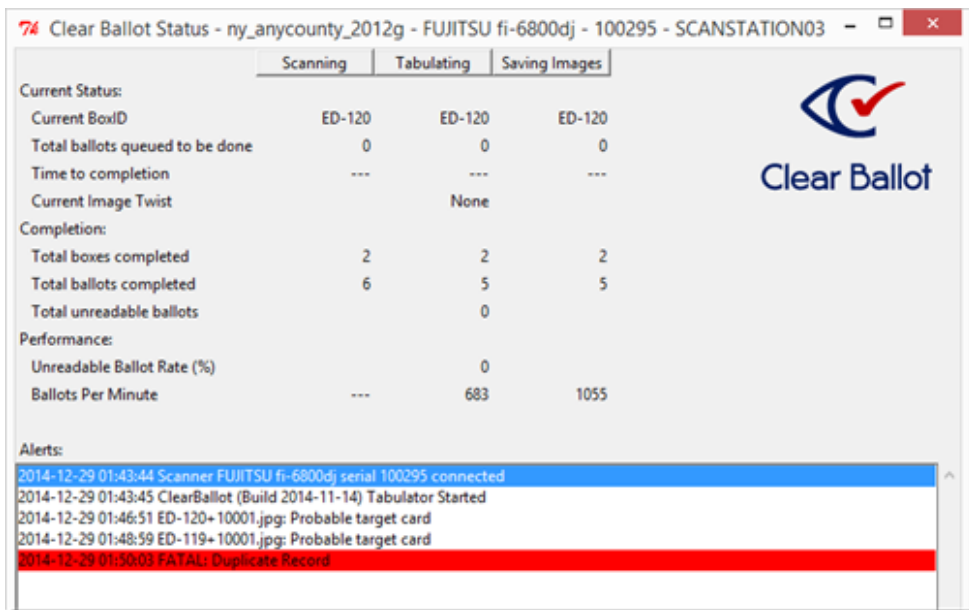


Figure B-3. Example of fatal Tabulator error

Non-fatal Tabulator message

A Tabulator message or exception is highlighted by a yellow background in the Tabulator Alerts box as shown in the figure. Take the action indicted by the message and allow Tabulator to continue to run. Tabulator may need to be closed and then started again. If the message is repeated continuously, report it to Clear Ballot Group Technical Support.

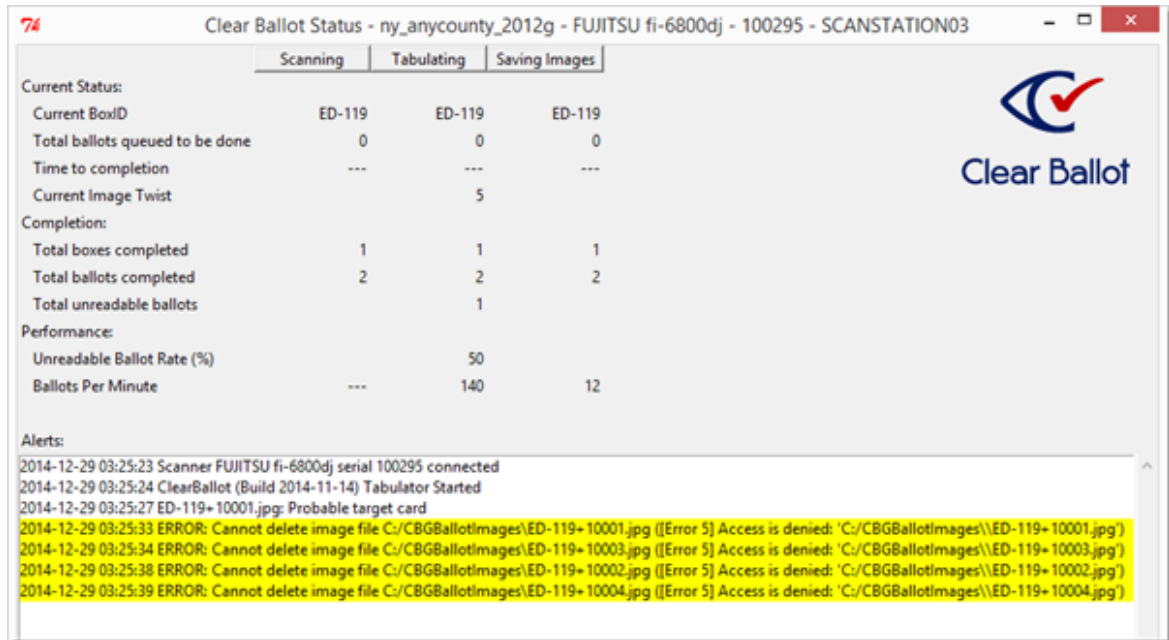


Figure B-4. Example of non-fatal Tabulator error

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