



Clear Ballot

**ClearDesign 1.4  
Maintenance Guide  
(Vote-by-Mail Campaign 2)**

---

## ClearDesign Maintenance Guide (Vote-by-Mail Campaign 2)

Clear Ballot Part Number: 100082-10012

Copyright © 2012–2018 Clear Ballot Group. All rights reserved.

ClearAccess, ClearAudit, Clear Ballot, ClearCast, ClearCount, ClearData, ClearDesign, ClearVote, Image-to-Ballot Traceability, MatchPoint, ScanServer, ScanStation, Speed Accuracy Transparency, Visualization of Voter Intent, Visual Verification, and Vote Visualization are trademarks of Clear Ballot Group.

ScandAll PRO is a trademark of Fujitsu Limited. All rights reserved. Other product and company names mentioned herein are the property of their respective owners.

Clear Ballot Group  
7 Water Street, Suite 700  
Boston, MA 02109  
857-250-4957  
[clearballot.com](http://clearballot.com)

---

## Document history

Date	Description	Version	Author
01/10/2017	Initial submission to EAC	1.0	Joe Srednicki
02/03/2017	Minor typographical and reference-related edits	1.0.1	Joe Srednicki
03/31/2017	Minor typographical and reference-related edits based on feedback from the state of Colorado	1.0.2	Joe Srednicki
06/16/2017	Minor updates for vote-by-mail campaign	1.0.3	Joe Srednicki
06/26/2017	Added section numbers	1.0.4	Joe Srednicki
07/21/2017	Update the version number for Colorado	1.0.5	Joe Srednicki
09/20/2017	Added chapter numbering. Changed section title from "Hardware maintenance" to "Hardware inspection." Updated "Updating Windows Defender Antivirus." Added: "Correcting deficiencies or faulty operations in software" and Chapter 3, "Maintenance facilities and support."	1.0.6	Joe Srednicki
11/06/2017	Added references to the beginning of the chapters "Hardware maintenance" and "Software maintenance."	1.0.7	Joe Srednicki
01/19/2018	Vote-by-Mail campaign 2	1.0.8	Joni G. McNutt



---

## Table of contents

<b>Preface</b> .....	<b>5</b>
<b>Chapter 1. Hardware maintenance</b> .....	<b>6</b>
1.1 Hardware inspection .....	6
1.2 Cleaning the monitor .....	6
<b>Chapter 2. Software maintenance</b> .....	<b>7</b>
2.1 Updating Windows Defender Antivirus on DesignStations .....	7
2.1.1 Downloading antivirus definitions offline .....	7
2.1.2 Temporarily disabling software restrictions .....	7
2.1.3 Adding updated antivirus definitions to a DesignStation .....	8
2.1.4 Reenabling software restrictions .....	9
2.2 Backing up an election .....	9
2.3 Validating the software version .....	9
2.4 Database analysis and performance tuning .....	11
2.5 Correcting deficiencies or faulty operations in software .....	12
<b>Chapter 3. Maintenance facilities and support</b> .....	<b>13</b>
3.1 Spare or backup devices .....	13
3.2 Maintenance furnishings, fixtures, and utilities .....	13



## Preface

This section defines the purpose of this document. It contains the following subsections.

- About this document
- Scope of this document
- Intended audience
- Contact us

### About this document

This document provides information about maintenance for ClearDesign.

This document corresponds to *VVSG 2005, Volume 2, Section 2.9*.



A ClearVote™ system can comprise the ClearAccess™, ClearAudit™, ClearCast™, ClearCount™ and ClearDesign™ products. Jurisdictions are not required to purchase all products. You can ignore references to any ClearVote components that are not part of your voting system. Also ignore implementation options that are not relevant to your policies and procedures.

### Scope of this document

The document contains the following chapters:

- [Chapter 1. Hardware maintenance](#)
- [Chapter 2. Software maintenance](#)
- [Chapter 3. Maintenance facilities and support](#)

### Intended audience

This document is intended for election officials and election staff who are responsible for operations and maintenance before, during, and after an election. This document is also used by Clear Ballot personnel who support election officials and election staff.

### Contact us

Clear Ballot Group welcomes your feedback on our documentation. Please send comments to [Documentation@ClearBallot.com](mailto:Documentation@ClearBallot.com).

If you have questions about using your ClearVote product, contact your Clear Ballot representative.

## Chapter 1. Hardware maintenance

This chapter describes maintenance for ClearDesign hardware, which involve inspecting the hardware and cleaning the monitor.

For additional information about ClearDesign hardware, see the following:

- For a summary description of the hardware, see the table "Hardware components of ClearDesign" in the *ClearDesign System Overview*.
- For specific models of hardware used for ClearDesign, see Approved components in the *ClearVote Approved Parts List*.
- Because ClearDesign uses commercial off-the-shelf hardware (COTS), see the documentation of the hardware manufacturer for details. You can get this documentation from Clear Ballot or directly from the hardware manufacturer.

### 1.1 Hardware inspection

No hardware maintenance is required other than making sure that:

- There is no physical damage to the computer.
- The cables and power cords are attached.
- The computer turns on.
- You can log on to check if the monitor, keyboard, and mouse are working properly.

### 1.2 Cleaning the monitor

Clean the monitor according to the manufacturer's recommendation.



## Chapter 2. Software maintenance

This chapter describes maintenance for the ClearDesign software.

The information technology (IT) resource or vendor of a jurisdiction can perform all the software maintenance tasks listed in this chapter. For software updates, contact Clear Ballot Technical Support.

### 2.1 Updating Windows Defender Antivirus on DesignStations

Microsoft provides the Windows Defender antivirus program with its Windows operating system that runs on DesignStations. To keep the antivirus definitions current, Microsoft recommends updating Windows Defender at least once a week.

Because ClearDesign computers are over a closed, wired Ethernet, you must update the antivirus definitions offline by using removable memory media such as a CD or DVD.

#### 2.1.1 Downloading antivirus definitions offline

To download antivirus definitions offline:

1. Locate a computer outside the closed ClearDesign Ethernet that has a USB port and Internet connection.
2. Navigate to <https://www.microsoft.com/security/portal/definitions/adl.aspx>.
3. Download the antivirus definitions according to the instructions on that site for your operating system and bit version.

The antivirus definitions are downloaded to a file named **mpam-fe.exe** or something similar.

4. Insert a USB drive into a USB port on the computer where you downloaded the antivirus definition file.
5. Copy the antivirus definition file to the USB drive.
6. Eject the USB drive.

#### 2.1.2 Temporarily disabling software restrictions

When updating third-party software, such as antivirus definitions, on the DesignStations, temporarily disable any software restriction policy that you set up during system configuration so that the update can run.

After installing the update, be sure to reenable the software restriction policy.



To disable the software restrictions, follow these steps:

1. Log in to the DesignStation as the Windows administrator.
2. From the task bar, type **gpedit** into the **Search** field and select **Edit group policy** from the search results.  
Windows displays the Local Group Policy Editor.
3. In the left pane of the Local Group Policy Editor, select **Computer Configuration > Windows Settings > Security Settings > Software Restriction Policies > Security Levels**.
4. In the right pane, double-click **Unrestricted** to open the Unrestricted Properties dialog.
5. Click the **Set as Default** button and then click **OK**.
6. Close the Local Group Policy Editor.

### 2.1.3 Adding updated antivirus definitions to a DesignStation

To add updated antivirus definitions to a DesignStation:

1. Log in to the DesignStation as the Windows administrator.
2. From the task bar, type **defender** into the **Search** field and then select **Windows Defender Security Center** from the search results.
3. Click **Virus & threat protection**.
4. Click **Protection Updates**.  
Note the date and time that the definitions were created. Do not close the Protection Updates window.
5. Insert the USB drive containing the updated antivirus definitions into a USB port on the DesignStation and browse to the file.
6. Right-click the file and select the **Run as Administrator** option from the pop-up menu.
7. When the User Account Control dialog appears, click **Yes** to run the update.  
You may see the mouse pointer spinning as the update progresses. If not, wait 30 seconds.
8. Return to the Protection Updates window and check the date and time that the definitions were created.  
The date should be the date you downloaded the file. Close the Protection Updates window.
9. Re-enable the software restriction policy as described in Updating third-party software.



### 2.1.4 Reenabling software restrictions

After updating antivirus definitions on a DesignStation, you must reenable software restrictions.

Follow these steps:

1. Log on to the computer as the Windows administrator.
2. From the taskbar, type **gpedit** in the **Search** field.  
Windows displays the Local Group Policy Editor.
3. In the left navigation pane of the Local Group Policy Editor, select **Computer Configuration > Windows Settings > Software Restriction Policies > Security Levels**.
4. In the right pane, double-click **Disallowed**.  
Windows displays the Disallowed Properties dialog.
5. Click the **Set as Default** button and then click **OK**.
6. Close the Local Group Policy Editor.

## 2.2 Backing up an election

For information about backing up elections, see "Election backup and support" in the *ClearDesign User Guide*.

## 2.3 Validating the software version

Use this section to verify the following:

- The correct software is running on ClearDesign computers.
- The ClearDesign software has not been modified.
- No unauthorized software is running on ClearDesign computers.

Clear Ballot provides a list of all approved files on ClearDesign computers and sends the documentation to the election authority of your state.

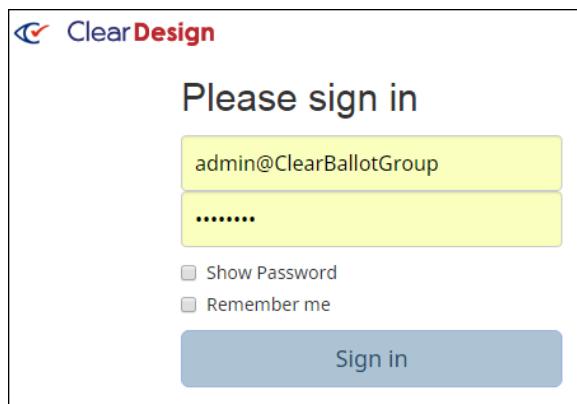


To access the list of files:

1. In the address bar of a browser, enter the server name provided by your administrator in the format:

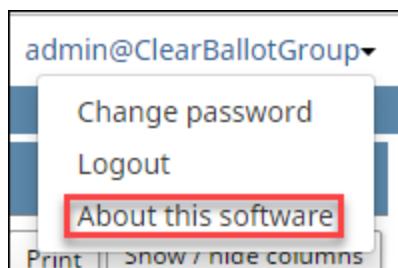
**http://servername or https://servername**

2. When the Login screen appears (Figure 1), enter your username and password and click the **Sign In** button.



**Figure 1. Login screen**

3. When the Elections view of ClearDesign appears (Figure 2), click your username in the upper right corner of the screen and select **About this software** from the drop-down menu.



**Figure 2. Selecting About this software**

The About window appears. This window has two tabs:

- The **Clear Ballot Product Files** tab lists the installed files containing ClearDesign software. This tab appears by default. Figure 3 shows this tab.
- The **Installed System Information** tab lists the third-party packages installed with the ClearDesign software. Figure 4 shows this tab.

4. As an alternative, compare the printed version of the *ClearDesign System Identification Guide* with the **Clear Ballot Product Files** and the **Installed System Information** tabs.

If there are mismatches, ask your administrator to reinstall ClearDesign. If mismatches persist after reinstallation, notify your state election authority and Clear Ballot Technical Support before continuing to use ClearDesign.

**Figure 3. Example: Clear Ballot Product Files tab showing the installed ClearDesign files - partial screen shown**

Package	Version	Description
accounts-service	0.6.35-0ubuntu7.2	query and manipulate user account information
acpid	1:2.0.21-1ubuntu2	Advanced Configuration and Power Interface daemon
adduser	3.113+nmu3ubuntu3	add and remove users and groups
apache2	2.4.7-1ubuntu4.9	Apache HTTP Server
apache2-bin	2.4.7-1ubuntu4.9	Apache HTTP Server (binary files and modules)
apache2-data	2.4.7-1ubuntu4.9	Apache HTTP Server (common files)
apt	1.6.15~2430~0ubuntu2.1	APT - Advanced Package Tool
apt-transport-https	2.0.1~2430~0ubuntu2.1	APT - Transport for https
aptitude	0.8.10.20160104.1	high-quality .
ca-certificates	14.04.1	Common CA certificates
cloud-guest-utils	0.27-0ubuntu9.2	cloud guest utilities
cloud-init	0.7.5-0ubuntu1.18	Init scripts for cloud instances

**Figure 4. Example: Installed System Information tab showing third-party files installed with ClearDesign - partial screen shown**

## 2.4 Database analysis and performance tuning

A ClearDesign database is self-tuning. No customer tuning is required. Database performance analysis is not required. If a jurisdiction is concerned about database performance, contact Clear Ballot Technical Support.

## 2.5 Correcting deficiencies or faulty operations in software

*Responsive to VVSG 2005, Volume 2, Section 2.9.2.2.b.*

If you identify a defect, follow these guidelines:

1. Ensure that all settings are configured properly.
2. Repeat and write down the steps required to reproduce the defect.
3. If possible, capture a screen image.
4. Contact Clear Ballot Technical Support to see if there is a workaround.

If a patch or bug fix is required, Clear Ballot develops and certifies the fix as quickly as possible. Clear Ballot then makes the fix available through its standard distribution mechanisms.

## Chapter 3. Maintenance facilities and support

*Responsive to VVSG 2005, Volume 2, Section 2.9.5*

This chapter identifies facilities and other supports required for equipment maintenance.

Jurisdictions may have their own specific maintenance requirements.

### 3.1 Spare or backup devices

The ClearDesign system runs on highly reliable, unmodified COTS hardware. The DesignServer and one or more DesignStations are connected over a closed, wired Ethernet.

If a jurisdiction has more than one DesignStation, one can be considered as a spare if the other DesignStation fails.

Some jurisdictions purchase a backup DesignServer to have on hand if the primary DesignServer malfunctions. Clear Ballot recommends putting the spare DesignServer through readiness and L&A testing so that it can be used immediately if a malfunction occurs.

ClearBallot recommends purchasing a maintenance contract from the supplier of the DesignServer and DesignStations.

### 3.2 Maintenance furnishings, fixtures, and utilities

*Responsive to VVSG 2005, Volume 2, Section 2.8.2*

Maintenance of the ClearDesign equipment requires: a table or desk, lighting, and power.

